

CRPL-F 27

National Bureau of Standards

AUG 21 1947

# IONOSPHERIC DATA

ISSUED

NOVEMBER, 1946

PREPARED BY CENTRAL RADIO PROPAGATION LABORATORY  
National Bureau of Standards  
Washington, D.C.



## IONOSPHERIC DATA

## CONTENTS

Terminology and Scaling Practices . . . . .	Page 2
Monthly Average and Median Values of World-Wide Ionospheric Data . . . . .	Page 4
Ionospheric Data for Every Day and Hour at Washington, D.C. .	Page 6
Ionosphere Disturbances . . . . .	Page 7
American Relative Sunspot Numbers . . . . .	Page 8
Errata . . . . .	Page 9
Tables of Ionospheric Data . . . . .	Page 10
Graphs of Ionospheric Data . . . . .	Page 43
Index of Tables and Graphs of Ionospheric Data . . . . .	Page 75

## TERMINOLOGY AND SCALING PRACTICES

The symbols and terminology used in this report are those adopted by the International Radio Propagation Conference, and given in detail on pages 24 to 26 of the report IRPL-C61, "Report of International Radio Propagation Conference," and in the section on "Terminology," in reports IRPL-F1, 2, 3, 4, 5.

In the past, ionospheric conditions were summarized on a monthly basis by using average or mean values, for each hour of the day, for each month. However, following the recommendations of the International Radio Propagation Conference, held in Washington 17 April to 5 May 1944, beginning with data for 1 Jan. 1945, median values were used by IRPL wherever possible. Thus, median values are given for Washington, for all stations reporting directly to the CRPL, for the Canadian stations, and for all others sending in detailed tabulations to the CRPL, from which medians can be computed.

Where averages are reported, they are, at any hour, the average for all the days during the month for which numerical data existed.

The monthly median values used here are the values equaled or exceeded on half the days of the month at the given hour. The following conventions are used in determining the medians for hours when no measured values are given because of equipment limitations and ionospheric irregularities. Symbols used are those given in the report referred to above, IRPL-C61.

a. For all ionospheric characteristics:

Values missing because of A, B, C or F (see terminology referred to above) are omitted from the median count.

b. For critical frequencies and virtual heights:

Values missing because of E are counted as equal to or less than the lower limit of the recorder.

Values missing because of D are counted as equal to or greater than the upper limit of the recorder.

Values missing because of G are counted:

1. For  $f^oF_2$ , as equal to or less than  $f^oF_1$ .

2. For  $h'F_2$ , as equal to or greater than the median.

Values missing for any other reason are omitted from the median count.

c. For muf factors (M-factors):

Values missing because of G are counted as equal to or less than the median.

Values missing for any other reason are omitted from the median count.



d. For sporadic E (Es):

Values of fEs missing because no Es reflections appeared, the equipment functioning normally otherwise, are counted as equal to or less than the median  $f^oE$ , or equal to or less than the lower frequency count of the recorder.

Values of fEs missing for any other reason, and values of hEs missing for any reason at all are omitted from the median count.

Beginning with data for November 1945, doubtful monthly median values for ionospheric observations at Washington, D.C., are indicated by parentheses, in accordance with the practice already in use for doubtful hourly values. The following are the conventions used to determine whether or not a median value is doubtful:

1. If only four values or less are available, no median value is computed, the data being considered insufficient.

2. For the F2 layer, if only five to nine values are available, the median is considered doubtful. The E and F1 layers are so regular in their characteristics that, as long as there are at least five values, the median is not considered as doubtful.

3. For all layers, if more than half of the values used to compute the median are doubtful (either doubtful or interpolated), the median is considered doubtful.

It is expected that this practice will be of assistance in evaluating the monthly median Washington data.

The same conventions are used by the CRPL in computing the medians from tabulations of daily and hourly data for stations other than Washington, beginning with the tables in IRPL-F18.

"Extent of E" is defined as follows: the highest value of  $f^oE$ . This is usually Es, but may include cases of normal E which were difficult to distinguish from Es, owing to the absence of a definite cusp.

# MONTHLY AVERAGE AND MEDIAN VALUES OF WORLD-WIDE IONOSPHERIC DATA

The ionospheric data given here in Tables 1 to 63 and Figs. 1 to 125 were assembled by the Central Radio Propagation Laboratory for analysis and correlation, incidental to CRPL predictions of radio propagation conditions. The data are median values unless otherwise indicated. The following are the sources of the data:

Australian Council for Scientific and Industrial Research,  
Radio Research Board:

Brisbane, Australia  
Canberra, Australia  
Cape York, Australia  
Hobart, Tasmania  
Townsville, Australia

British Department of Scientific and Industrial Research,  
Radio Research Board:

Slough, England  
Burghead, Scotland  
Colombo, Ceylon  
Oslo, Norway  
Cairo, Egypt  
Falkland Is.  
Tromso, Norway

Canadian Radio Wave Propagation Committee:

Churchill, Canada  
Ottawa, Canada  
St. John's, Newfoundland  
Prince Rupert, Canada  
Clyde, Baffin I.  
Swan River, Manitoba (Mobile unit)  
The Pas, Manitoba (Mobile unit)  
Gillam, Manitoba (Mobile unit)

New Zealand Radio Research Committee:

Kermadec Is.  
Christchurch (Canterbury University College Observatory)  
Campbell I.  
Pitcairn I.  
Rarotonga I.

South African Council for Scientific and Industrial Research:

Johannesburg, Union of S. Africa  
Capetown, Union of S. Africa

Scientific Research Institute of Terrestrial Magnetism, Moscow, U.S.S.R.:

Bukhta Tikhaya, U.S.S.R.  
 Tomsk, U.S.S.R.  
 Sverdlovsk, U.S.S.R.  
 Moscow, U.S.S.R.  
 Leningrad, U.S.S.R.  
 Alma Ata, U.S.S.R.

Carnegie Institution of Washington (Department of Terrestrial Magnetism):

Huancayo, Peru  
 Watheroo, W. Australia

United States Army Signal Corps:

Leyte, Philippine Is.  
 Tokyo, Japan  
 Okinawa, I.

National Bureau of Standards (Central Radio Propagation Laboratory):

Washington, D. C.  
 San Francisco, California (Stanford University)  
 Baton Rouge, Louisiana (Louisiana State University)  
 San Juan, Puerto Rico (University of Puerto Rico)  
 Boston, Massachusetts (Harvard University)  
 Fairbanks, Alaska (University of Alaska, College, Alaska)  
 Wuchang, China (National Wuhan University)  
 Palmyra I.  
 Adak, Alaska  
 Guam I.  
 Maui, Hawaii  
 Trinidad, British West Indies

All India Radio (Government of India), New Delhi, India:

Bombay, India  
 Delhi, India  
 Madras, India  
 Peshawar, India

Radio Wave Research Laboratories, Central Broadcasting Administration:

Chungking, China  
 Peiping, China

Beginning with the CRPL-F26, publication of tables of so-called "provisional data," reported to the CRPL by telephone or telegraph will be discontinued. The reason for this change in policy is that users of the data hitherto published in this form receive it through established channels sooner than it reaches them in the F-series. Furthermore, having two sets of data, "provisional" and "final," for the same station for the same month leads to confusion.

It must be emphasized that there is to be no change in the methods used for rapid reporting and exchange of data. The change has to do only with the printing of provisional data in the F-series. Comments on this decision are invited.

The tables and graphs of ionospheric data are correct for the values reported to the CRPL, but, because of variations in practice in the interpretation of records and scaling and manner of reporting of values, may at times give an erroneous conception of typical ionospheric characteristics at the station. Some of these errors are due to:

- a. Differences in scaling records where spread echoes are present.
- b. Omission of values where  $f^oF_2$  is less than or equal to  $f^oF_1$ , leading to erroneously high values of monthly average or median values.
- c. Omission of values where critical frequencies are less than the lower frequency limit of the recorder, also leading to erroneously high values of monthly average or median values.

These effects were discussed on pages 6 and 7 of the previous F-series reports, IRPL-F1, 2, 3, 4, and 5.

The dashed-line prediction curves of the graphs of ionospheric data are obtained from the predicted zero-muf contour charts of the CRPL-D series publications. Predictions for individual stations used to construct the charts may be more accurate than the values read from the chart since some smoothing of the contours is necessary to allow for the longitude effect within a zone.

Discrepancies between predicted and observed values are often ascribable to these effects.

## IONOSPHERIC DATA FOR EVERY DAY AND HOUR AT WASHINGTON, D. C.

The data given in Tables 64 to 75 follow the scaling practices given in the report IRPL-C61, "Report of International Radio Propagation Conference," pages 36 to 39, and the median values are determined by the conventions given above under "Terminology and Scaling Practices."



## IONOSPHERE DISTURBANCES

Table 76 presents ionosphere character figures for Washington, D. C., during October 1946, as determined by the criteria presented in the report IRPL-R5, "Criteria for Ionospheric Storminess," together with American magnetic K-figures, which are usually covariant with them.

Table 77 lists for the stations whose locations are given the sudden ionosphere disturbances observed on the continuous field intensity recordings made at the Sterling Radio Propagation Laboratory during October 1946.

Table 78 lists for the stations whose locations are given the sudden ionosphere disturbances observed at the Brentwood and Somerton, England receiving stations of Cable and Wireless Ltd. from September 13 to October 5, 1946.

Table 79 gives provisional radio propagation quality figures for North Atlantic and North Pacific areas, for 01 to 12 and 13 to 24 GCT, September 1946, compared with the CRPL daily radio disturbance warnings, which are primarily for the North Atlantic paths, the CRPL weekly radio propagation forecasts of probable disturbed periods, and the half-day American geomagnetic K-figures.

The radio propagation quality figures for the North Atlantic are prepared from radio traffic and ionospheric data reported to the CRPL, in the manner described in detail in report IRPL-R31, "North Atlantic Radio Propagation Disturbances October 1943 through October 1945," issued 1 Feb. 1946.

The radio propagation quality figures for the North Pacific are prepared from radio traffic and ionospheric data reported to the CRPL, in a manner similar to that of IRPL-R31. The master scale of IRPL-R31 was used to formulate conversion scales for the North Pacific reports. Currently, beginning with CRPL-F23, issued July 1946, the North Pacific radio propagation quality figures reported are prepared from these revised conversion scales rather than, as hitherto, from the conversion scales of report IRPL-R13, "Ionospheric and Radio Propagation Disturbances, October 1943 through February 1945," issued 24 May 1945.

These radio propagation quality figures give a consensus of opinion of actual radio propagation conditions as reported by the half-day over the two general areas. It should be borne in mind, however, that though the quality may be disturbed according to the CRPL scale, the cause of the disturbance is not necessarily known. There are many variables that must be considered. In addition to ionospheric storminess itself as the



cause, conditions may be reported as disturbed because of seasonal characteristics, such as are particularly evident in the pronounced day and night contrast over North Pacific paths during the winter months, or because of improper frequency usage for the path and time of day in question. Insofar as possible, frequency usage is included in rating the reports. Where the actual frequency usage is not shown in the report to the CRPL, it has been assumed that the report is made on the use of optimum working frequencies for the path and time of day in question. Since there is a possibility that all of the disturbance shown by the quality figures is not due to ionospheric storminess alone, care should be taken in using the quality figures in research correlations with solar, auroral, geomagnetic or other data. Nevertheless, these quality figures do reflect a consensus of opinion of actual radio propagation conditions as found on any one half-day in either of the two general areas.

## AMERICAN RELATIVE SUNSPOT NUMBERS

Table 80 presents the daily median values of relative sunspot numbers as reported by American observers for October 1946. The reports have been reduced, by appropriate constants, approximately to the Zurich scale of relative sunspot numbers. The monthly relative sunspot number is the mean of the daily median values listed in the table. This method was devised by Mr. A. H. Shapley while a member of the staff of the Department of Terrestrial Magnetism, Carnegie Institution of Washington. Details will be found in his article, "American Observations of Relative Sunspot Numbers in 1945 for Application to Ionospheric Prediction," Popular Astronomy, Vol. 54, No. 7, pp. 351-358, August 1946. The criteria for A observers have been modified slightly, beginning with September 1946. Rather than the mean deviation for the four monthly constants being held within a value of 0.16 of the four-month mean, the mean deviation must be held within 15% of that observer's constant of the four-month mean. In addition, sunspot numbers must be reported for at least one-half of the month during three-fourths of the year. This will tend to restrict the observers to those whose observations are consistent from month to month without rejecting the work of observers for whom weather conditions are unsatisfactory for observations during some months of the year.

## ERRATA

1. IRPL-F19, Table 60; F21, Tables 53 and 63; F24, Tables 68 and 73:

Data for Feshawar and Madras, India were observed at 2230 instead of 2300.

2. Virtual heights from Prince Rupert Ionospheric Station (Canada) have been in error from October 1945 through August 1946. For this period 25 km should be added to all virtual heights.

3. IRPL-F5, Tables 40, 43; F9, Table 33; F20, Tables 71, 74, 78; CRPL-F23, Tables 54, 56; F25, Tables 58, 61, 63; F26, Tables 22, 27:

Column headed "h'F2" should be headed "h max F2 (height at 0.83 f<sup>o</sup>F2)," not "h'F2." (Data from Slough, England).

Table 1

Washington, D.C. (39.0°N, 77.5°W)

October 1946

Time	h1F2	f0F2	h1F1	f0F1	h1F	f0F	f1a	f2-M3000
00	280	5.4					2.3	2.8
01	270	5.4					1.9	2.8
02	270	5.3					2.2	2.8
03	270	4.8					2.2	2.8
04	260	4.4					2.3	2.8
05	260	3.8					2.3	2.8
06	250	4.6					2.7	2.9
07	230	7.1					2.0	3.2
08	230	(9.0)			110	2.0	2.7	3.2
09	240	(10.0)	220		110	2.7	2.9	3.2
10	250	10.4	220		100	(3.0)	2.9	3.1
11	260	11.4	210		100	(3.3)	3.8	3.0
12	260	11.5	220	(5.0)	100	3.4	3.7	3.0
13	260	11.5	220	4.9	100	3.5	3.0	2.9
14	260	11.4	220		105	(3.5)	3.7	(3.0)
15	250	(11.3)	230		100	(3.2)	3.6	2.9
16	240	(11.0)	230		110	2.9	3.7	(2.9)
17	230	(8.9)			110	2.5	2.8	(3.0)
18	230	(7.7)				1.8	2.4	(3.0)
19	230	(7.0)					2.7	(3.0)
20	240	(6.4)					2.2	(2.9)
21	250	(6.0)					2.3	(2.8)
22	260	(5.7)					2.2	(2.8)
23	270						2.3	(2.8)

Time: 75.0°W.

Sweep: 0.75 Mc to 11.5 Mc in 3.4 minutes; after October 28, 1946,  
0.75 Mc to 16.0 Mc in 3.8 minutes.

Table 3

Churchill, Canada (58.8°N, 94.2°W)

September 1946

Time	h1F2	f0F2	h1F1	f0F1	h1F	f0F	f1a	f2-M3000
00	310	4.5					6.1	2.8
01	(320)	3.8					3.6	2.6
02	310	3.4					3.6	2.8
03	(310)	3.2					3.4	2.7
04	340	3.6				2.6	3.6	2.8
05	330	4.1				2.5	3.6	2.8
06	300	4.9				2.9	3.0	3.0
07	300	2.3			120	3.0	2.6	3.0
08	325	2.5	240		120	3.2	3.0	3.0
09	360	2.6	240		120	3.2	3.0	3.0
10	370	2.9	230		120	3.5	2.8	2.8
11	390	6.3	230		130	3.3	2.7	2.7
12	365	6.3	240		130	3.3	2.7	2.7
13	370	6.6	240		120	3.2	2.8	2.8
14	390	6.6	230		130	3.2	2.8	2.8
15	355	6.7	240		130	3.2	2.8	2.8
16	330	6.5	250		130	2.9	2.8	2.8
17	330	6.4	270		130	2.9	2.8	2.8
18	315	5.8			120	2.8	3.0	3.0
19	290	5.5			130	3.2	3.0	3.0
20	310	5.1			125	3.1	3.9	3.8
21	295	4.8			130	2.3	3.8	3.8
22	310	4.4					4.8	2.8
23	290	4.4					6.0	2.8

Time: 90.0°W.

Sweep: 2.0 Mc to 16.0 Mc in one minute.

Table 2

Fairbanks, Alaska (64.9°N, 147.8°W)

September 1946

Time	h1F2	f0F2	h1F1	f0F1	h1F	f0F	f1a	f2-M3000
00	352	4.2					5.5	2.5
01	346	3.4					5.3	2.7
02	345	4.0					5.5	2.6
03	346	3.0					5.2	2.6
04	335	3.8					5.5	2.6
05	318	4.3					5.5	2.7
06	300	4.6					5.5	2.8
07	265	5.0					4.6	2.7
08	366	5.2	250				3.7	2.7
09	390	5.4	240				3.1	2.6
10	375	5.7	240				3.0	2.7
11	370	5.8	240				3.0	2.7
12	345	6.4	240				3.1	2.7
13	328	6.6	240				3.0	2.8
14	280	6.6	240				3.0	2.8
15	250	6.9	250				2.9	2.8
16	255	6.8					2.8	2.8
17	260	6.2					2.5	2.9
18	260	6.2					2.2	2.8
19	260	5.6					1.6	2.9
20	260	5.6					3.0	2.8
21	295	5.8					1.1	2.7
22	300	4.0					3.4	2.6
23	352	4.2					5.8	2.6

Time: 150.0°W.

Sweep: 16.0 Mc to 0.5 Mc in fifteen minutes.

Table 4

Adak, Alaska (51.9°N, 176.6°W)

September 1946

Time	h1F2	f0F2	h1F1	f0F1	h1F	f0F	f1a	f2-M3000
00	315	3.8						2.7
01								
02								
03								
04								
05								
06	275	5.0	250		110	2.3	2.3	3.0
07	265	5.6	235		105	2.6	2.6	3.1
08	260	6.8	225		110	3.0	2.7	3.2
09	270	7.3	212		105	3.4	3.4	3.3
10	265	7.4	215	4.7	105	3.4	3.4	3.2
11								
12	250	7.8	205	(5.0)	105	3.5	4.0	3.2
13	265	7.9	215	4.8	105	3.4	3.1	3.2
14	268	6.3	218		110	3.3	3.1	3.2
15								
16								
17	225	7.1					2.2	3.2
18	230	6.4					2.0	3.2
19	230	5.6					3.1	3.1
20	255	5.0					3.0	3.0
21	255	5.0					4.2	2.8
22	288	4.0					4.2	2.8
23	315	4.0					5.8	2.6

Time: 180.0°W.

Sweep: Manual operation.

Table 5

St. John's, Newfoundland (47.6°N, 52.7°W)

September 1946

Time	H <sub>1</sub> F <sub>2</sub>	F <sub>2</sub> F <sub>2</sub>	H <sub>1</sub> F <sub>1</sub>	F <sub>2</sub> F <sub>1</sub>	H <sub>1</sub> F	F <sub>2</sub> F	F <sub>2</sub> F <sub>2</sub>	F <sub>2</sub> F <sub>2</sub>
00	(260)	(5.7)						(3.2)
01	(250)	(5.5)						(3.3)
02	(250)	(5.2)						(3.3)
03	(250)	(4.9)						(3.3)
04								(3.4)
05	(320)	(4.5)						(3.4)
06	(235)	(4.5)						(3.4)
07	(230)	(5.3)	190	2.3	100	2.5	2.5	(3.4)
08	(240)	(5.9)	190	4.0	90	2.9	2.7	(3.5)
09	(270)	(6.1)	190	4.4	90	3.1	3.1	(3.4)
10	(270)	(6.1)	190	4.7	90	3.2	3.2	(3.5)
11	(280)	(6.6)	180	5.0	90	3.4	3.3	(3.5)
12	(290)	(7.2)	180	5.0	90	3.5	3.6	(3.5)
13	(260)	(7.0)	180	5.0	90	3.5		(3.4)
14	(260)	(7.1)	190	4.9	90	3.5		(3.4)
15	(260)	(7.4)	190	4.7	90	3.2	2.5	(3.4)
16	(260)	(7.3)	190	4.4	90	3.0	2.4	(3.4)
17	(260)	(7.5)	200	3.9	90	2.6	2.1	(3.5)
18	(230)	(7.8)	200	3.8	100	2.6	2.1	(3.5)
19	(210)	(7.8)					2.4	(3.5)
20	(200)	(7.0)					2.4	(3.5)
21	(210)	(6.5)					2.4	(3.5)
22	(240)	(5.3)					2.3	(3.5)
23	(240)	(5.0)					2.5	(3.2)

Time: 52.5°N.  
Sweep: Manual operation.

Table 6

Ottawa, Canada (45.5°N, 75.8°W)

September 1946

Time	H <sub>1</sub> F <sub>2</sub>	F <sub>2</sub> F <sub>2</sub>	H <sub>1</sub> F <sub>1</sub>	F <sub>2</sub> F <sub>1</sub>	H <sub>1</sub> F	F <sub>2</sub> F	F <sub>2</sub> F <sub>2</sub>	F <sub>2</sub> F <sub>2</sub>
00	295	4.4						2.9
01	310	3.5						2.9
02	330	3.4						2.9
03	325	3.2						3.0
04	340	2.9						3.0
05	315	3.2						3.1
06	255	4.5						3.0
07	240	6.0						3.0
08	280	6.2	220	4.0	130	2.5	2.5	3.0
09	285	6.7	210	4.6	110	2.8	2.8	3.0
10	310	7.4	200	4.9	110	3.1	3.1	2.9
11	310	7.6	200	5.0	110	3.6	2.8	2.8
12	330	7.8	200	5.0	110	3.6	2.8	2.8
13	340	8.2	210	5.0	110	3.5	2.8	2.8
14	300	8.4	210	4.9	110	3.4	2.7	2.7
15	300	8.4	215	4.7	110	3.5	2.8	2.8
16	280	8.3	220	4.5	110	3.1	2.8	2.8
17	260	8.4	230	3.9	120	2.7	2.8	2.8
18	240	7.9			140	2.5	2.8	2.8
19	240	7.4					2.8	2.8
20	240	7.2					2.8	2.8
21	260	6.1					2.8	2.8
22	270	5.4					2.8	2.8
23	290	4.7					2.7	3.0

Time: 75.0°N.  
Sweep: 1.93 Mc to 13.5 Mc. Manual operation.

Table 7

Boston, Massachusetts (42.4°N, 71.2°W)

September 1946

Time	H <sub>1</sub> F <sub>2</sub>	F <sub>2</sub> F <sub>2</sub>	H <sub>1</sub> F <sub>1</sub>	F <sub>2</sub> F <sub>1</sub>	H <sub>1</sub> F	F <sub>2</sub> F	F <sub>2</sub> F <sub>2</sub>	F <sub>2</sub> F <sub>2</sub>
00	300	5.0						2.6
01	298	4.7						2.6
02	300	4.3						2.6
03	290	3.9						2.6
04	300	3.6						2.6
05	300	3.3						2.6
06	300	3.5						2.7
07	275	5.4			135	2.4	2.9	2.9
08	300	6.4			135	2.8	2.9	2.9
09	300	7.0			135	3.0	2.9	2.9
10	300	7.1	250	4.9			2.8	2.8
11	330	7.2					2.9	2.9
12	325	7.5					2.8	2.8
13	325	7.5					2.9	2.9
14	330	7.6					2.9	2.9
15	330	7.5					2.9	2.9
16	300	8.0					2.7	2.7
17	300	8.0					2.8	2.8
18	275	8.0			130	3.2	2.8	2.8
19	268	8.0			135	3.0	2.7	2.7
20	260	7.6			140	2.7	2.6	2.6
21	272	7.0					2.6	2.6
22	280	6.2					2.6	2.6
23	295	5.6					2.6	2.6

Time: 75.0°N.  
Sweep: 0.95 Mc to 13.75 Mc in one minute.

Table 2

San Francisco, California (37.4°N, 122.2°W)

September 1946

Time	H <sub>1</sub> F <sub>2</sub>	F <sub>2</sub> F <sub>2</sub>	H <sub>1</sub> F <sub>1</sub>	F <sub>2</sub> F <sub>1</sub>	H <sub>1</sub> F	F <sub>2</sub> F	F <sub>2</sub> F <sub>2</sub>	F <sub>2</sub> F <sub>2</sub>
00	320	4.1						2.6
01	325	4.0						2.6
02	320	4.2						2.5
03	300	4.2						2.6
04	300	4.2						2.6
05	280	4.1						2.9
06	260	5.6						2.9
07	260	7.2	240	4.2	130	2.6	2.6	2.6
08	280	8.0	240	4.6	130	3.1	3.0	3.0
09	280	8.5	230	4.9	130	3.1	2.9	2.9
10	300	8.8	220	5.0	120	3.7	2.8	2.8
11	310	9.2	220	5.2	120	3.8	2.8	2.8
12	300	9.1	220	5.3	130	3.8	2.8	2.8
13	300	10.0	220	5.1	130	3.8	2.8	2.8
14	300	10.0	230	5.0	130	3.7	2.8	2.8
15	280	9.4	240	4.9	120	3.1	2.9	2.9
16	250	9.3	240	4.4	130	3.1	3.4	3.0
17	250	9.0	235	3.8	120	2.6	2.6	3.0
18	240	8.5					2.5	2.9
19	240	7.7					2.6	2.9
20	240	6.4					2.6	2.8
21	260	5.2					2.6	2.8
22	270	4.6					2.7	2.7
23	300	4.3					2.6	2.6

Time: 120.0°N.  
Sweep: 0.8 Mc to 12.0 Mc in six minutes.

Table 9

Isten Roupe, Louisiana (30.50°N, 91.20°E) September 1946

Time	hPF2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	300	4.9						2.9
01	300	4.8						2.9
02	300	4.8						3.0
03	300	4.7						3.0
04	310	4.6						2.9
05	290	4.5						2.9
06	270	5.9						3.1
07	260	7.5	250	3.7	130	2.5		3.2
08	260	8.4	250	4.2	140	2.9		3.2
09	270	8.4	240	4.5	120	3.3		3.1
10	295	9.2	240	4.8	120	3.5		3.0
11	300	9.5	225	5.0	120	3.6		3.0
12	300	9.6	220	5.1	140	3.7		3.1
13	300	9.6	230	5.1	120	3.7		3.1
14	295	9.6	240	5.0	140	3.6		3.1
15	290	9.6	240	4.8	140	3.5		3.1
16	270	9.5	240	4.3	120	3.0		3.1
17	255	9.5	250	3.7	120	4.6		3.2
18	250	9.2			130	(2.2)	3.0	3.2
19	240	7.2					2.4	3.2
20	250	6.0					2.8	3.0
21	260	5.6						3.0
22	270	5.4						2.9
23	285	5.1						3.0

Time: 90.00°.

Sweep: 1.0 Mc to 0.5 Mc in three minutes, thirty seconds.

Table 11

San Juan, Puerto Rico (18.40°N, 66.10°E) September 1946

Time	hPF2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		6.5						2.8
01		6.1						2.8
02		5.8						2.9
03		5.2						2.9
04		4.6						2.8
05		4.7						2.8
06		5.4						2.9
07	240	7.6						3.2
08	260	8.2				3.0		3.0
09	300	10.0	225	4.2		3.2		3.0
10	320	9.9	230	4.9		3.5		2.8
11	345	10.7	230	5.0		3.7		2.8
12	345	11.2	230	5.1		3.7		2.8
13	340	11.4	230	5.2		3.5		2.8
14	340	11.4	235	5.0		3.7		2.8
15	350	11.5	270	4.8		3.5		2.8
16	300	10.8	230	4.2		3.2		2.8
17	300	9.7					4.0	2.9
18	280	9.4						3.0
19	285	8.2						3.0
20		6.6						2.9
21		6.4						2.9
22		6.0						2.6
23		6.3						2.8

Time: 60.00°.

Sweep: 2.5 Mc to 14.0 Mc in eight minutes.

Table 10

Maui, Hawaii (20.80°N, 156.50°E) September 1946

Time	hPF2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	300	7.7						2.8
01	255	7.5						3.1
02	255	6.7						3.0
03	280	4.2						2.8
04	350	4.0						2.7
05	350	3.8						2.8
06	280	5.6						2.9
07	300	8.2						3.0
08	300	9.0	250		3.0			2.8
09	310	9.8	250		4.8			2.8
10	350	11.0	250		5.0			2.6
11	360	12.2	250		5.2			2.6
12	375	12.5	250		5.4			2.6
13	360	12.6	250		5.6			2.8
14	350	12.8	250		5.4			2.9
15	350	12.6	250		5.0			2.9
16	300	12.8	250		4.6			3.0
17	300	12.2	250		2.6			2.9
18	270	11.6						2.9
19	270	10.0						2.9
20	300	9.9						2.9
21	300	8.8						2.8
22	310	7.9						2.7
23	350	7.5						2.6

Time: 150.00°.

Sweep: 2.2 Mc to 16.0 Mc in one minute.

Table 12

Guam I. (13.5°N, 144.80°E) September 1946

Time	hPF2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	(250)				100		2.4	
01	240	(14.2)			100		3.1	
02	(220)				100		3.6	
03	(230)						3.0	
04	(220)						2.8	
05	(240)	(5.5)			100		3.8	3.0
06	(255)	(4.7)			100		4.4	3.2
07	(246)	(8.0)			100		4.6	
08								
09								
10	(320)	(11.4)	210		5.8		5.8	2.4
11	(330)	(11.5)			95		6.2	2.5
12	(330)	(11.8)			110		5.9	2.5
13								
14								
15								
16	258	(12.4)			100		7.0	2.8
17	(270)				120		4.9	
18	(300)						3.2	
19								
20								
21								
22								
23	(250)				100		3.3	

Time: 150.00°.

Sweep: Manual operation.



Table 13

Trinidad, Brit. West Indies (10.6°N, 61.2°W) September 1946

Time	h'P2	f'P2	h'P1	f'P1	h'E	f'E	P2-M3000
00	240	5.5					3.1
01	230	7.7					3.3
02	220	6.3					3.1
03	210	5.8					3.0
04	200	5.3					3.0
05	190	5.2					3.1
06	180	6.2					3.1
07	170	5.4					3.1
08	160	9.2					3.4
09	150	10.8					3.2
10	140	12.8					3.0
11	130	12.8					2.9
12	120	14.0					2.9
13	110	14.5					2.8
14	100	14.0					2.9
15	90	13.2					2.9
16	80	12.0					2.9
17	70	11.9					2.9
18	60	11.9					3.0
19	50	11.2					3.0
20	40	10.0					3.4
21	30	9.2					2.9
22	20	8.0					2.8
23	10	6.8					3.0

Time: 6C.G.O.

Sweep: Manual operation.

Table 14

Johannesburg, Union of S. Africa (26.2°S, 28.0°E) September 1946

Time	h'P2	f'P2	h'P1	f'P1	h'E	f'E	P2-M3000
00							2.9
01							2.9
02							3.0
03							2.9
04							2.9
05							3.0
06	250						3.2
07	230	7.8					3.4
08	230	8.8					3.3
09	250	9.6					3.2
10	260	10.4					3.1
11	270	10.8					3.0
12	280	11.2					3.0
13	280	11.0					3.0
14	270	11.0					3.0
15	250	10.8					2.9
16	250	10.5					2.9
17	230	10.3					2.9
18	230	9.9					3.0
19	220	8.8					3.1
20	220	7.4					3.2
21	250	5.8					3.2
22	260	4.8					3.2
23	260	4.3					3.0

Time: 30.0°E.

Sweep: 2.0 Mc to 15.0 Mc in eight seconds.

Table 15

Christchurch, N. Z. (43.5°S, 172.6°E) September 1946

Time	h'P2	f'P2	h'P1	f'P1	h'E	f'E	P2-M3000
00	270	5.8					2.8
01	260	7.0					2.8
02	250	7.2					2.7
03	240	7.2					2.8
04	230	7.2					2.8
05	220	7.2					2.8
06	210	7.2					2.8
07	200	7.2					2.8
08	190	7.2					2.8
09	180	7.2					2.8
10	170	7.2					2.8
11	160	7.2					2.8
12	150	7.2					2.8
13	140	7.2					2.8
14	130	7.2					2.8
15	120	7.2					2.8
16	110	7.2					2.8
17	100	7.2					2.8
18	90	7.2					2.8
19	80	7.2					2.8
20	70	7.2					2.8
21	60	7.2					2.8
22	50	7.2					2.8
23	40	7.2					2.8

Time: 172.5°E.

Sweep: 1.0 Mc to 13.0 Mc.

Table 16 (Compares Table 11, CRPL-F25)

Haui, Hawaii (20.0°N, 156.5°W) August 1946

Time	h'P2	f'P2	h'P1	f'P1	h'E	f'E	P2-M3000
00	300	8.4					2.9
01	270	8.2					3.0
02	250	8.2					3.1
03	250	6.7					3.1
04	250	5.8					3.1
05	250	5.4					3.1
06	260	6.2					3.0
07	250	7.4					3.0
08	250	7.8					3.0
09	350	8.6					2.5
10	400	9.6					2.6
11	400	10.5					2.6
12	400	11.5					2.6
13	350	11.8					2.7
14	350	12.2					2.8
15	325	12.5					2.9
16	300	12.3					3.0
17	300	12.0					3.0
18	250	11.4					3.0
19	280	10.2					2.9
20	300	10.0					2.8
21	300	9.3					2.9
22	300	9.0					2.9
23	300	8.1					2.9

Time: 150.0°W.

Sweep: 2.2 Mc to 16.0 Mc in one minute.

Table 17

Guam I. (13.5°N, 144.8°E) August 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	fOE	fEs	F2-M3000
00	250	(9.6)					2.8	2.9
01	250	(9.7)					2.8	3.1
02								
03								
04								
05	230	6.2						3.2
06	250	5.9						3.0
07	240	5.0						3.1
08					110		4.6	
09								
10	330	10.6	190	5.8	100		6.0	2.4
11	370	10.8	190	6.0	100		7.2	2.4
12	380	11.6	190	5.8	100		6.0	2.5
13								
14								
15								
16	300	13.2	230	5.3	100		7.4	2.8
17	275	12.7			110		7.0	2.7
18	300	12.2					5.5	2.5
19								
20								
21								
22								
23	290							3.2

Time: 150.00%.

Sweep: Manual operation.

Table 19

Johannesburg, Union of S. Africa (26.2°S, 28.0°E) August 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	fOE	fEs	F2-M3000
00	3.2						2.1	3.1
01	3.1							3.0
02	3.1							3.0
03	3.0							3.2
04	3.0							3.1
05	2.9							3.0
06	3.1							3.0
07	6.4							3.4
08	220	8.0	220	3.5	100	2.1	2.3	3.4
09	240	8.8	210	4.0	100	2.8		3.4
10	250	9.5	200	4.6	100	3.3		3.3
11	260	10.3	200	4.8	100	3.5		3.2
12	260	9.8	200	4.8	100	3.6		3.1
13	270	9.8	200	4.8	100	3.6		3.0
14	260	9.9	200	4.8	100	3.6		3.0
15	250	9.8	210	4.5	100	3.4		3.0
16	240	9.5	220	3.8	100	3.0	3.3	3.1
17	230	9.5				2.4		3.1
18	210	8.6				2.3		3.2
19	210	6.6				2.4		3.3
20	230	5.0						3.3
21	230	4.3						3.2
22	3.4							3.4
23	3.3							3.1

Time: 30.00%.

Sweep: 2.0 Mc to 15.0 Mc in eight seconds.

Table 18

Harotonga I. (21.3°S, 159.8°W) August 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	fOE	fEs	F2-M3000
00		7.5						3.0
01		7.0						3.0
02		6.2						3.1
03		4.6						3.1
04		3.7						3.0
05		3.1						2.9
06		3.0						2.7
07	260	7.1						3.1
08	250	10.0	240	4.3				3.3
09	280	11.1	245	4.8		3.8		3.2
10	280	11.7	230	5.0		4.1		3.2
11	280	11.0	240	5.2		4.2		3.2
12	295	10.1	245	5.3		4.2		3.1
13	300	10.2	215	5.1		4.0		3.0
14	290	9.8	235	5.2		4.0		2.9
15	300	10.1	230	5.0		3.8		2.9
16	285	10.1	250	4.7		3.5		2.9
17	270	10.0	260	4.5		3.2		2.9
18	260	9.8						3.0
19		9.7						2.9
20		9.9						2.8
21		9.2						2.9
22		8.2						2.9
23								3.0

Time: 157.50%.

Sweep: 2.0 Mc to 16.0 Mc. Manual operation.

Table 20

Kermadec Is. (29.3°S, 177.9°W) August 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	fOE	fEs	F2-M3000
00								
01								
02								
03								
04								
05								
06	320	4.2						2.7
07	275	7.2						3.1
08	275	8.8	260	3.9	E	2.0		3.2
09	285	9.3	265	4.5	135	2.8		3.1
10	300	9.4	260	4.8	130	3.2		3.1
11	310	9.6	265	4.8	125	3.4		3.0
12	300	9.1	250	4.8	130	3.5		3.0
13	310	8.8	255	4.8	125	3.6		3.0
14	310	8.6	255	4.6	130	3.5		3.0
15	300	8.3	265	4.6	125	3.4		2.9
16	300	8.0	275	4.2	130	2.8		2.9
17	285	8.2			125	2.2		2.9
18	270	7.4						2.7
19	275	6.2						
20								
21								
22								
23								

Time: 180.00%.

Sweep: 1.8 Mc to 12.0 Mc. Manual operation.

Table 21

Christchurch, N. Z. (43.5°S, 172.6°E)

August 1946

Time	H <sub>1</sub> F <sub>2</sub>	F <sub>2</sub> F <sub>2</sub>	H <sub>1</sub> F <sub>1</sub>	F <sub>2</sub> F <sub>1</sub>	H <sub>1</sub> F <sub>1</sub>	F <sub>2</sub> F <sub>1</sub>	F <sub>2</sub> F <sub>2</sub>	F <sub>2</sub> F <sub>1</sub>	F <sub>2</sub> F <sub>2</sub>
00	270	4.6						2.8	2.9
01	260	4.6						3.2	2.9
02	260	4.1						3.1	2.9
03	260	3.9						3.0	2.9
04	250	3.5						2.8	2.9
05	250	3.3						2.8	2.9
06	250	3.1						2.8	2.9
07	240	4.8						2.8	2.9
08	230	7.3						2.8	2.9
09	230	8.0						2.9	3.2
10	250	8.3	220	4.0				3.2	3.2
11	450	8.6	220	4.7				3.3	3.2
12	260	9.2	220	4.8				3.4	3.2
13	250	8.9	220	4.6				3.3	3.1
14	250	8.7	220	4.4				3.2	3.1
15	250	8.6	220	4.1				3.0	3.1
16	230	8.3	230	3.5				2.5	3.1
17	230	7.9						1.7	3.1
18	230	7.0						2.9	2.9
19	235	6.6						1.6	2.9
20	240	5.6						1.8	2.8
21	250	5.4						1.8	2.8
22	270	5.0						2.2	2.8
23	270	4.7						2.2	2.8

Time: 172.5°E.

Sweep: 1.0 Mc to 13.0 Mc.

Table 23

Tromsø, Norway (69.7°N, 18.9°E)

July 1946\*

Time	H <sub>1</sub> F <sub>2</sub>	F <sub>2</sub> F <sub>2</sub>	H <sub>1</sub> F <sub>1</sub>	F <sub>2</sub> F <sub>1</sub>	H <sub>1</sub> F <sub>1</sub>	F <sub>2</sub> F <sub>1</sub>	F <sub>2</sub> F <sub>2</sub>	F <sub>2</sub> F <sub>1</sub>	F <sub>2</sub> F <sub>2</sub>
00									
01									
02									
03									
04									
05	446	6.0							
06	397	6.1	4.4					3.1	
07	397	6.0	4.6					3.2	
08	390	6.2	4.7					3.3	
09	404	6.2	4.8					3.4	
10	400	6.2	5.0					3.4	
11	400	6.0	4.8					3.4	
12	404	6.0	4.8					3.4	
13	382	5.9	4.8					3.4	
14	416	6.1	4.8					3.4	
15	371	6.0	4.5					3.2	
16	373	5.9	4.4					3.0	
17	354	5.7	4.4					3.0	
18	320	5.6	4.0					3.2	
19	310	(5.4)						(3.1)	
20	310	(5.0)						(2.8)	
21	(3.2)	(4.8)						4.8	
22	(3.2)							4.8	
23									

Time: 0.0°.

Sweep: 0.1 Mc to 11.4 Mc in five minutes.  
\*from 2300 through 0500, no values reported.

Table 22

Campbell I. (52.5°S, 169.2°E)

August 1946

Time	H <sub>1</sub> F <sub>2</sub>	F <sub>2</sub> F <sub>2</sub>	H <sub>1</sub> F <sub>1</sub>	F <sub>2</sub> F <sub>1</sub>	H <sub>1</sub> F <sub>1</sub>	F <sub>2</sub> F <sub>1</sub>	F <sub>2</sub> F <sub>2</sub>	F <sub>2</sub> F <sub>1</sub>	F <sub>2</sub> F <sub>2</sub>
00									
01									
02									
03									
04									
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									

Time: 165.0°E.

Sweep: 1.0 Mc to 15.0 Mc. Manual operation.

Table 24

Cairo, Egypt (30.6°N, 31.9°E)

July 1946

Time	H <sub>1</sub> F <sub>2</sub>	F <sub>2</sub> F <sub>2</sub>	H <sub>1</sub> F <sub>1</sub>	F <sub>2</sub> F <sub>1</sub>	H <sub>1</sub> F <sub>1</sub>	F <sub>2</sub> F <sub>1</sub>	F <sub>2</sub> F <sub>2</sub>	F <sub>2</sub> F <sub>1</sub>	F <sub>2</sub> F <sub>2</sub>
00									
01									
02									
03									
04									
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									

Time: 30.0°E.

\*Extent of E<sub>s</sub> (See p. 3, last paragraph.)

Table 24 (Continued Table 16, CRUL-225)

Leyte, Philippine Is. (11.0°N, 125.0°E) July 1946

Time	h'P2	f'P2	b'P1	f'P1	b'E	f'E	P2-M3000
00		9.0				2.6	2.8
01	7.7						2.9
02	7.0						2.9
03	6.6						2.9
04	6.1						3.0
05	5.8						3.2
06	5.2						3.1
07	7.1						3.1
08	8.8				2.3	3.0	3.0
09	9.3				3.5	5.6	3.0
10	10.1						2.5
11	10.3						2.4
12	10.3						2.3
13	10.1				5.8	7.8	2.2
14	10.2				5.6	7.8	2.2
15	10.0				5.6	7.4	2.2
16	10.6						2.3
17	10.5						2.3
18	10.3				3.2	5.9	2.4
19	10.2						2.4
20	9.4						2.4
21	8.8						2.4
22	9.0						2.5
23	8.8					2.5	2.6

Time: 135.00°. Sweep: Manual operation. Lower limit of frequency 1.6 Mc.

Table 25

Brisbane, Australia (27.5°S, 153.0°E) July 1946

Time	h'P2	f'P2	b'P1	f'P1	b'E	f'E	P2-M3000
00	300	4.2					2.9
01	290	4.2					2.9
02	280	4.1					3.0
03	280	3.8					2.8
04	290	3.6					3.0
05	290	3.4					3.0
06	280	3.7					3.3
07	230	6.6					3.3
08	240	5.5					3.3
09	245	9.6			115		3.3
10	260	9.5			110		3.2
11	260	9.0			105		3.2
12	270	8.7			110		3.1
13	280	9.0			110		3.1
14	280	9.2			110		3.0
15	260	8.6			110		3.1
16	240	8.0			115		3.1
17	240	8.0			115		3.1
18	240	6.6			110		3.1
19	250	5.9			110		2.9
20	270	5.3			110		2.9
21	280	5.0			110		2.9
22	280	4.5			110		3.0
23	300	4.2			115		2.8

Time: 150.00°. Sweep: 2.2 Mc to 12.5 Mc in two minutes, thirty seconds.

Table 26 (Continued Table 16, CRUL-225)

Okinawa I. (26.5°N, 127.0°E) July 1946

Time	h'P2	f'P2	b'P1	f'P1	b'E	f'E	P2-M3000
00	5.4					4.7	2.6
01	5.3					4.6	2.8
02	7.8					4.5	2.8
03	6.8					3.6	2.7
04	6.3					3.2	2.7
05	6.0					3.2	2.7
06	6.4					3.8	3.0
07	7.4					3.0	3.2
08	7.5					5.0	3.2
09	7.6					5.3	3.0
10	7.9					5.4	2.7
11	7.8					5.8	2.6
12	6.9					5.8	2.6
13	10.8					5.8	2.7
14	10.7					5.4	2.6
15	10.9					5.7	2.7
16	11.1					5.1	2.8
17	11.4					5.2	2.8
18	11.0					5.3	2.9
19	6.7					4.7	2.9
20	6.8					4.6	2.6
21	6.4					3.4	2.6
22	6.4					4.2	2.6

Time: 135.00°. Sweep: Manual operation.

Table 27

Yonaguni, Australia (10.4°S, 126.5°E) July 1946

Time	h'P2	f'P2	b'P1	f'P1	b'E	f'E	P2-M3000
00	250	4.1				2.8	(3.0)
01	250	4.0				2.7	(3.2)
02	260	3.5				2.5	(3.3)
03	230	3.1				2.9	(3.2)
04	260	2.8				2.6	(2.8)
05	260	3.1				2.8	(2.9)
06	260	3.5				2.5	(3.1)
07	230	6.5				2.1	(3.4)
08	250	8.0				2.8	3.4
09	250	9.0				3.0	3.4
10	250	9.4				3.5	3.4
11	260	9.5				3.0	3.4
12	260	8.8				3.5	3.3
13	290	8.5				4.0	3.1
14	282	8.8				3.8	3.1
15	260	8.5				3.3	3.2
16	265	8.4				3.0	3.2
17	260	8.0				3.0	3.2
18	228	7.3				3.3	3.2
19	220	5.8				3.0	3.2
20	230	5.1				3.0	3.0
21	250	5.0				3.0	3.1
22	242	4.5				2.9	3.1
23	250	4.4				2.8	3.1

Time: 150.00°. Sweep: 1.0 Mc to 13.0 Mc in one minute, fifty-five seconds.

Table 29 (Supersedes Table 13, CRPL-F24.)

Watheroo, W. Australia (30.3°S, 115.9°E)

July 1946

Time	H.22	H.23	H.24	H.25	H.26	H.27	H.28	H.29	H.30	P.31	P.32	P.33	P.34	P.35	P.36	P.37	P.38	P.39	P.40	P.41	P.42	P.43	P.44	P.45	P.46	P.47	P.48	P.49	P.50	P.51	P.52	P.53	P.54	P.55	P.56	P.57	P.58	P.59	P.60	P.61	P.62	P.63	P.64	P.65	P.66	P.67	P.68	P.69	P.70	P.71	P.72	P.73	P.74	P.75	P.76	P.77	P.78	P.79	P.80	P.81	P.82	P.83	P.84	P.85	P.86	P.87	P.88	P.89	P.90	P.91	P.92	P.93	P.94	P.95	P.96	P.97	P.98	P.99	P.100	P.101	P.102	P.103	P.104	P.105	P.106	P.107	P.108	P.109	P.110	P.111	P.112	P.113	P.114	P.115	P.116	P.117	P.118	P.119	P.120	P.121	P.122	P.123	P.124	P.125	P.126	P.127	P.128	P.129	P.130	P.131	P.132	P.133	P.134	P.135	P.136	P.137	P.138	P.139	P.140	P.141	P.142	P.143	P.144	P.145	P.146	P.147	P.148	P.149	P.150	P.151	P.152	P.153	P.154	P.155	P.156	P.157	P.158	P.159	P.160	P.161	P.162	P.163	P.164	P.165	P.166	P.167	P.168	P.169	P.170	P.171	P.172	P.173	P.174	P.175	P.176	P.177	P.178	P.179	P.180	P.181	P.182	P.183	P.184	P.185	P.186	P.187	P.188	P.189	P.190	P.191	P.192	P.193	P.194	P.195	P.196	P.197	P.198	P.199	P.200	P.201	P.202	P.203	P.204	P.205	P.206	P.207	P.208	P.209	P.210	P.211	P.212	P.213	P.214	P.215	P.216	P.217	P.218	P.219	P.220	P.221	P.222	P.223	P.224	P.225	P.226	P.227	P.228	P.229	P.230	P.231	P.232	P.233	P.234	P.235	P.236	P.237	P.238	P.239	P.240	P.241	P.242	P.243	P.244	P.245	P.246	P.247	P.248	P.249	P.250	P.251	P.252	P.253	P.254	P.255	P.256	P.257	P.258	P.259	P.260	P.261	P.262	P.263	P.264	P.265	P.266	P.267	P.268	P.269	P.270	P.271	P.272	P.273	P.274	P.275	P.276	P.277	P.278	P.279	P.280	P.281	P.282	P.283	P.284	P.285	P.286	P.287	P.288	P.289	P.290	P.291	P.292	P.293	P.294	P.295	P.296	P.297	P.298	P.299	P.300	P.301	P.302	P.303	P.304	P.305	P.306	P.307	P.308	P.309	P.310	P.311	P.312	P.313	P.314	P.315	P.316	P.317	P.318	P.319	P.320	P.321	P.322	P.323	P.324	P.325	P.326	P.327	P.328	P.329	P.330	P.331	P.332	P.333	P.334	P.335	P.336	P.337	P.338	P.339	P.340	P.341	P.342	P.343	P.344	P.345	P.346	P.347	P.348	P.349	P.350	P.351	P.352	P.353	P.354	P.355	P.356	P.357	P.358	P.359	P.360	P.361	P.362	P.363	P.364	P.365	P.366	P.367	P.368	P.369	P.370	P.371	P.372	P.373	P.374	P.375	P.376	P.377	P.378	P.379	P.380	P.381	P.382	P.383	P.384	P.385	P.386	P.387	P.388	P.389	P.390	P.391	P.392	P.393	P.394	P.395	P.396	P.397	P.398	P.399	P.400	P.401	P.402	P.403	P.404	P.405	P.406	P.407	P.408	P.409	P.410	P.411	P.412	P.413	P.414	P.415	P.416	P.417	P.418	P.419	P.420	P.421	P.422	P.423	P.424	P.425	P.426	P.427	P.428	P.429	P.430	P.431	P.432	P.433	P.434	P.435	P.436	P.437	P.438	P.439	P.440	P.441	P.442	P.443	P.444	P.445	P.446	P.447	P.448	P.449	P.450	P.451	P.452	P.453	P.454	P.455	P.456	P.457	P.458	P.459	P.460	P.461	P.462	P.463	P.464	P.465	P.466	P.467	P.468	P.469	P.470	P.471	P.472	P.473	P.474	P.475	P.476	P.477	P.478	P.479	P.480	P.481	P.482	P.483	P.484	P.485	P.486	P.487	P.488	P.489	P.490	P.491	P.492	P.493	P.494	P.495	P.496	P.497	P.498	P.499	P.500	P.501	P.502	P.503	P.504	P.505	P.506	P.507	P.508	P.509	P.510	P.511	P.512	P.513	P.514	P.515	P.516	P.517	P.518	P.519	P.520	P.521	P.522	P.523	P.524	P.525	P.526	P.527	P.528	P.529	P.530	P.531	P.532	P.533	P.534	P.535	P.536	P.537	P.538	P.539	P.540	P.541	P.542	P.543	P.544	P.545	P.546	P.547	P.548	P.549	P.550	P.551	P.552	P.553	P.554	P.555	P.556	P.557	P.558	P.559	P.560	P.561	P.562	P.563	P.564	P.565	P.566	P.567	P.568	P.569	P.570	P.571	P.572	P.573	P.574	P.575	P.576	P.577	P.578	P.579	P.580	P.581	P.582	P.583	P.584	P.585	P.586	P.587	P.588	P.589	P.590	P.591	P.592	P.593	P.594	P.595	P.596	P.597	P.598	P.599	P.600	P.601	P.602	P.603	P.604	P.605	P.606	P.607	P.608	P.609	P.610	P.611	P.612	P.613	P.614	P.615	P.616	P.617	P.618	P.619	P.620	P.621	P.622	P.623	P.624	P.625	P.626	P.627	P.628	P.629	P.630	P.631	P.632	P.633	P.634	P.635	P.636	P.637	P.638	P.639	P.640	P.641	P.642	P.643	P.644	P.645	P.646	P.647	P.648	P.649	P.650	P.651	P.652	P.653	P.654	P.655	P.656	P.657	P.658	P.659	P.660	P.661	P.662	P.663	P.664	P.665	P.666	P.667	P.668	P.669	P.670	P.671	P.672	P.673	P.674	P.675	P.676	P.677	P.678	P.679	P.680	P.681	P.682	P.683	P.684	P.685	P.686	P.687	P.688	P.689	P.690	P.691	P.692	P.693	P.694	P.695	P.696	P.697	P.698	P.699	P.700	P.701	P.702	P.703	P.704	P.705	P.706	P.707	P.708	P.709	P.710	P.711	P.712	P.713	P.714	P.715	P.716	P.717	P.718	P.719	P.720	P.721	P.722	P.723	P.724	P.725	P.726	P.727	P.728	P.729	P.730	P.731	P.732	P.733	P.734	P.735	P.736	P.737	P.738	P.739	P.740	P.741	P.742	P.743	P.744	P.745	P.746	P.747	P.748	P.749	P.750	P.751	P.752	P.753	P.754	P.755	P.756	P.757	P.758	P.759	P.760	P.761	P.762	P.763	P.764	P.765	P.766	P.767	P.768	P.769	P.770	P.771	P.772	P.773	P.774	P.775	P.776	P.777	P.778	P.779	P.780	P.781	P.782	P.783	P.784	P.785	P.786	P.787	P.788	P.789	P.790	P.791	P.792	P.793	P.794	P.795	P.796	P.797	P.798	P.799	P.800	P.801	P.802	P.803	P.804	P.805	P.806	P.807	P.808	P.809	P.810	P.811	P.812	P.813	P.814	P.815	P.816	P.817	P.818	P.819	P.820	P.821	P.822	P.823	P.824	P.825	P.826	P.827	P.828	P.829	P.830	P.831	P.832	P.833	P.834	P.835	P.836	P.837	P.838	P.839	P.840	P.841	P.842	P.843	P.844	P.845	P.846	P.847	P.848	P.849	P.850	P.851	P.852	P.853	P.854	P.855	P.856	P.857	P.858	P.859	P.860	P.861	P.862	P.863	P.864	P.865	P.866	P.867	P.868	P.869	P.870	P.871	P.872	P.873	P.874	P.875	P.876	P.877	P.878	P.879	P.880	P.881	P.882	P.883	P.884	P.885	P.886	P.887	P.888	P.889	P.890	P.891	P.892	P.893	P.894	P.895	P.896	P.897	P.898	P.899	P.900	P.901	P.902	P.903	P.904	P.905	P.906	P.907	P.908	P.909	P.910	P.911	P.912	P.913	P.914	P.915	P.916	P.917	P.918	P.919	P.920	P.921	P.922	P.923	P.924	P.925	P.926	P.927	P.928	P.929	P.930	P.931	P.932	P.933	P.934	P.935	P.936	P.937	P.938	P.939	P.940	P.941	P.942	P.943	P.944	P.945	P.946	P.947	P.948	P.949	P.950	P.951	P.952	P.953	P.954	P.955	P.956	P.957	P.958	P.959	P.960	P.961	P.962	P.963	P.964	P.965	P.966	P.967	P.968	P.969	P.970	P.971	P.972	P.973	P.974	P.975	P.976	P.977	P.978	P.979	P.980	P.981	P.982	P.983	P.984	P.985	P.986	P.987	P.988	P.989	P.990	P.991	P.992	P.993	P.994	P.995	P.996	P.997	P.998	P.999	P.1000
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Time: 120.0°E.

Sweep: 16.0 Mc to 0.5 Mc in fifteen minutes.

**Table 31** (Supersedes Table 20, CRPL-F25)

Hobart, Tasmania (42.8°S, 147.4°E)

July 1946

Time	R/F2	F2F2	H/F1	F/F1	H/F	F/F2	F24	F2-M0000
00	255	3.0			150	2.0	2.9	3.1
01	275	2.9			100	2.6	2.8	3.1
02	270	2.8			100	3.0	2.9	3.5
03	250	2.7			100	3.2	3.2	3.4
04	250	2.7		4.4	100	3.2	3.3	3.4
05	250	2.7		200	100	3.1	3.5	3.3
06	250	2.5		4.0	100	3.0	2.8	3.3
07	250	2.5		205	100	2.8	3.0	3.3
08	245	2.9			100	2.3	2.8	3.4
09	220	5.5				1.8	2.8	3.3
10	220	7.2					2.6	3.3
11	220	8.9					2.5	3.2
12	210	9.5					2.2	3.3
13	210	9.2					2.1	3.2
14	225	9.0					2.1	3.2
15	225	8.8					2.7	3.1
16	225	8.5					2.9	3.1
17	215	7.6						
18	219	6.6						
19	225	5.5						
20	225	4.6						
21	210	4.0						
22	250	3.5						
23	250	3.2						

Time: 150.0°E.

Time: 150.0E.  
Sweep: 1.0 Mc to 13.0 Mc in one minute, fifty-five seconds.

**Table 30**

Canberra, Australia (35.3°S, 149.0°E)

July 1946

[illegible]

Time: 150.00E.

Sweep: 1.6 Mc to 12.5 Mc in two minutes.

Table 32

Tromsø, Norway (69.7°N, 18.9°E)

June 1946\*

h.172	h.171	h.170	h.169	h.168	h.167	h.166	h.165	h.164	h.163	h.162	h.161	h.160	h.159	h.158	h.157	h.156	h.155	h.154	h.153	h.152	h.151	h.150	h.149	h.148	h.147	h.146	h.145	h.144	h.143	h.142	h.141	h.140	h.139	h.138	h.137	h.136	h.135	h.134	h.133	h.132	h.131	h.130	h.129	h.128	h.127	h.126	h.125	h.124	h.123	h.122	h.121	h.120	h.119	h.118	h.117	h.116	h.115	h.114	h.113	h.112	h.111	h.110	h.109	h.108	h.107	h.106	h.105	h.104	h.103	h.102	h.101	h.100	h.99	h.98	h.97	h.96	h.95	h.94	h.93	h.92	h.91	h.90	h.89	h.88	h.87	h.86	h.85	h.84	h.83	h.82	h.81	h.80	h.79	h.78	h.77	h.76	h.75	h.74	h.73	h.72	h.71	h.70	h.69	h.68	h.67	h.66	h.65	h.64	h.63	h.62	h.61	h.60	h.59	h.58	h.57	h.56	h.55	h.54	h.53	h.52	h.51	h.50	h.49	h.48	h.47	h.46	h.45	h.44	h.43	h.42	h.41	h.40	h.39	h.38	h.37	h.36	h.35	h.34	h.33	h.32	h.31	h.30	h.29	h.28	h.27	h.26	h.25	h.24	h.23	h.22	h.21	h.20	h.19	h.18	h.17	h.16	h.15	h.14	h.13	h.12	h.11	h.10	h.9	h.8	h.7	h.6	h.5	h.4	h.3	h.2	h.1	h.0	h.-1	h.-2	h.-3	h.-4	h.-5	h.-6	h.-7	h.-8	h.-9	h.-10	h.-11	h.-12	h.-13	h.-14	h.-15	h.-16	h.-17	h.-18	h.-19	h.-20	h.-21	h.-22	h.-23	h.-24	h.-25	h.-26	h.-27	h.-28	h.-29	h.-30	h.-31	h.-32	h.-33	h.-34	h.-35	h.-36	h.-37	h.-38	h.-39	h.-40	h.-41	h.-42	h.-43	h.-44	h.-45	h.-46	h.-47	h.-48	h.-49	h.-50	h.-51	h.-52	h.-53	h.-54	h.-55	h.-56	h.-57	h.-58	h.-59	h.-60	h.-61	h.-62	h.-63	h.-64	h.-65	h.-66	h.-67	h.-68	h.-69	h.-70	h.-71	h.-72	h.-73	h.-74	h.-75	h.-76	h.-77	h.-78	h.-79	h.-80	h.-81	h.-82	h.-83	h.-84	h.-85	h.-86	h.-87	h.-88	h.-89	h.-90	h.-91	h.-92	h.-93	h.-94	h.-95	h.-96	h.-97	h.-98	h.-99	h.-100	h.-101	h.-102	h.-103	h.-104	h.-105	h.-106	h.-107	h.-108	h.-109	h.-110	h.-111	h.-112	h.-113	h.-114	h.-115	h.-116	h.-117	h.-118	h.-119	h.-120	h.-121	h.-122	h.-123	h.-124	h.-125	h.-126	h.-127	h.-128	h.-129	h.-130	h.-131	h.-132	h.-133	h.-134	h.-135	h.-136	h.-137	h.-138	h.-139	h.-140	h.-141	h.-142	h.-143	h.-144	h.-145	h.-146	h.-147	h.-148	h.-149	h.-150	h.-151	h.-152	h.-153	h.-154	h.-155	h.-156	h.-157	h.-158	h.-159	h.-160	h.-161	h.-162	h.-163	h.-164	h.-165	h.-166	h.-167	h.-168	h.-169	h.-170	h.-171	h.-172	h.-173	h.-174	h.-175	h.-176	h.-177	h.-178	h.-179	h.-180	h.-181	h.-182	h.-183	h.-184	h.-185	h.-186	h.-187	h.-188	h.-189	h.-190	h.-191	h.-192	h.-193	h.-194	h.-195	h.-196	h.-197	h.-198	h.-199	h.-200	h.-201	h.-202	h.-203	h.-204	h.-205	h.-206	h.-207	h.-208	h.-209	h.-210	h.-211	h.-212	h.-213	h.-214	h.-215	h.-216	h.-217	h.-218	h.-219	h.-220	h.-221	h.-222	h.-223	h.-224	h.-225	h.-226	h.-227	h.-228	h.-229	h.-230	h.-231	h.-232	h.-233	h.-234	h.-235	h.-236	h.-237	h.-238	h.-239	h.-240	h.-241	h.-242	h.-243	h.-244	h.-245	h.-246	h.-247	h.-248	h.-249	h.-250	h.-251	h.-252	h.-253	h.-254	h.-255	h.-256	h.-257	h.-258	h.-259	h.-260	h.-261	h.-262	h.-263	h.-264	h.-265	h.-266	h.-267	h.-268	h.-269	h.-270	h.-271	h.-272	h.-273	h.-274	h.-275	h.-276	h.-277	h.-278	h.-279	h.-280	h.-281	h.-282	h.-283	h.-284	h.-285	h.-286	h.-287	h.-288	h.-289	h.-290	h.-291	h.-292	h.-293	h.-294	h.-295	h.-296	h.-297	h.-298	h.-299	h.-300	h.-301	h.-302	h.-303	h.-304	h.-305	h.-306	h.-307	h.-308	h.-309	h.-310	h.-311	h.-312	h.-313	h.-314	h.-315	h.-316	h.-317	h.-318	h.-319	h.-320	h.-321	h.-322	h.-323	h.-324	h.-325	h.-326	h.-327	h.-328	h.-329	h.-330	h.-331	h.-332	h.-333	h.-334	h.-335	h.-336	h.-337	h.-338	h.-339	h.-340	h.-341	h.-342	h.-343	h.-344	h.-345	h.-346	h.-347	h.-348	h.-349	h.-350	h.-351	h.-352	h.-353	h.-354	h.-355	h.-356	h.-357	h.-358	h.-359	h.-360	h.-361	h.-362	h.-363	h.-364	h.-365	h.-366	h.-367	h.-368	h.-369	h.-370	h.-371	h.-372	h.-373	h.-374	h.-375	h.-376	h.-377	h.-378	h.-379	h.-380	h.-381	h.-382	h.-383	h.-384	h.-385	h.-386	h.-387	h.-388	h.-389	h.-390	h.-391	h.-392	h.-393	h.-394	h.-395	h.-396	h.-397	h.-398	h.-399	h.-400	h.-401	h.-402	h.-403	h.-404	h.-405	h.-406	h.-407	h.-408	h.-409	h.-410	h.-411	h.-412	h.-413	h.-414	h.-415	h.-416	h.-417	h.-418	h.-419	h.-420	h.-421	h.-422	h.-423	h.-424	h.-425	h.-426	h.-427	h.-428	h.-429	h.-430	h.-431	h.-432	h.-433	h.-434	h.-435	h.-436	h.-437	h.-438	h.-439	h.-440	h.-441	h.-442	h.-443	h.-444	h.-445	h.-446	h.-447	h.-448	h.-449	h.-450	h.-451	h.-452	h.-453	h.-454	h.-455	h.-456	h.-457	h.-458	h.-459	h.-460	h.-461	h.-462	h.-463	h.-464	h.-465	h.-466	h.-467	h.-468	h.-469	h.-470	h.-471	h.-472	h.-473	h.-474	h.-475	h.-476	h.-477	h.-478	h.-479	h.-480	h.-481	h.-482	h.-483	h.-484	h.-485	h.-486	h.-487	h.-488	h.-489	h.-490	h.-491	h.-492	h.-493	h.-494	h.-495	h.-496	h.-497	h.-498	h.-499	h.-500	h.-501	h.-502	h.-503	h.-504	h.-505	h.-506	h.-507	h.-508	h.-509	h.-510	h.-511	h.-512	h.-513	h.-514	h.-515	h.-516	h.-517	h.-518	h.-519	h.-520	h.-521	h.-522	h.-523	h.-524	h.-525	h.-526	h.-527	h.-528	h.-529	h.-530	h.-531	h.-532	h.-533	h.-534	h.-535	h.-536	h.-537	h.-538	h.-539	h.-540	h.-541	h.-542	h.-543	h.-544	h.-545	h.-546	h.-547	h.-548	h.-549	h.-550	h.-551	h.-552	h.-553	h.-554	h.-555	h.-556	h.-557	h.-558	h.-559	h.-560	h.-561	h.-562	h.-563	h.-564	h.-565	h.-566	h.-567	h.-568	h.-569	h.-570	h.-571	h.-572	h.-573	h.-574	h.-575	h.-576	h.-577	h.-578	h.-579	h.-580	h.-581	h.-582	h.-583	h.-584	h.-585	h.-586	h.-587	h.-588	h.-589	h.-590	h.-591	h.-592	h.-593	h.-594	h.-595	h.-596	h.-597	h.-598	h.-599	h.-600	h.-601	h.-602	h.-603	h.-604	h.-605	h.-606	h.-607	h.-608	h.-609	h.-610	h.-611	h.-612	h.-613	h.-614	h.-615	h.-616	h.-617	h.-618	h.-619	h.-620	h.-621	h.-622	h.-623	h.-624	h.-625	h.-626	h.-627	h.-628	h.-629	h.-630	h.-631	h.-632	h.-633	h.-634	h.-635	h.-636	h.-637	h.-638	h.-639	h.-640	h.-641	h.-642	h.-643	h.-644	h.-645	h.-646	h.-647	h.-648	h.-649	h.-650	h.-651	h.-652	h.-653	h.-654	h.-655	h.-656	h.-657	h.-658	h.-659	h.-660	h.-661	h.-662	h.-663	h.-664	h.-665	h.-666	h.-667	h.-668	h.-669	h.-670	h.-671	h.-672	h.-673	h.-674	h.-675	h.-676	h.-677	h.-678	h.-679	h.-680	h.-681	h.-682	h.-683	h.-684	h.-685	h.-686	h.-687	h.-688	h.-689	h.-690	h.-691	h.-692	h.-693	h.-694	h.-695	h.-696	h.-697	h.-698	h.-699	h.-700	h.-701	h.-702	h.-703	h.-704	h.-705	h.-706	h.-707	h.-708	h.-709	h.-710	h.-711	h.-712	h.-713	h.-714	h.-715	h.-716	h.-717	h.-718	h.-719	h.-720	h.-721	h.-722	h.-723	h.-724	h.-725	h.-726	h.-727	h.-728	h.-729	h.-730	h.-731	h.-732	h.-733	h.-734	h.-735	h.-736	h.-737	h.-738	h.-739	h.-740	h.-741	h.-742	h.-743	h.-744	h.-745	h.-746	h.-747	h.-748	h.-749	h.-750	h.-751	h.-752	h.-753	h.-754	h.-755	h.-756	h.-757	h.-758	h.-759	h.-760	h.-761	h.-762	h.-763	h.-764	h.-765	h.-766	h.-767	h.-768	h.-769	h.-770	h.-771	h.-772	h.-773	h.-774	h.-775	h.-776	h.-777	h.-778	h.-779	h.-780	h.-781	h.-782	h.-783	h.-784	h.-785	h.-786	h.-787	h.-788	h.-789	h.-790	h.-791	h.-792	h.-793	h.-794	h.-795	h.-796	h.-797	h.-798	h.-799	h.-800	h.-801	h.-802	h.-803	h.-804	h.-805	h.-806	h.-807	h.-808	h.-809	h.-810	h.-811	h.-812	h.-813	h.-814	h.-815	h.-816	h.-817	h.-818	h.-819	h.-820	h.-821	h.-822	h.-823	h.-824	h.-825	h.-826	h.-827	h.-828	h.-829	h.-830	h.-831	h.-832	h.-833	h.-834	h.-835	h.-836	h.-837	h.-838	h.-839	h.-840	h.-841	h.-842	h.-843	h.-844	h.-845	h.-846	h.-847	h.-848	h.-849	h.-850	h.-851	h.-852	h.-853	h.-854	h.-855	h.-856	h.-857	h.-858	h.-859	h.-860	h.-861	h.-862	h.-863	h.-864	h.-865	h.-866	h.-867	h.-868	h.-869	h.-870	h.-871	h.-872	h.-873	h.-874	h.-875	h.-876	h.-877	h.-878	h.-879	h.-880	h.-881	h.-882	h.-883	h.-884	h.-885	h.-886	h.-887	h.-888	h.-889	h.-890	h.-891	h.-892	h.-893	h.-894	h.-895	h.-896	h.-897	h.-898	h.-899	h.-900	h.-901	h.-902	h.-903	h.-904	h.-905	h.-906	h.-907	h.-908	h.-909	h.-910	h.-911	h.-912	h.-913	h.-914	h.-915	h.-916	h.-917	h.-918	h.-919	h.-920	h.-921	h.-922	h.-923	h.-924	h.-925	h.-926	h.-927	h.-928	h.-929	h.-930	h.-931	h.-932	h.-933	h.-934	h.-935	h.-936	h.-937	h.-938	h.-939	h.-940	h.-941	h.-942	h.-943	h.-944	h.-945	h.-946	h.-947	h.-948	h.-949	h.-950	h.-951	h.-952	h.-953	h.-954	h.-955	h.-956	h.-957	h.-958	h.-959	h.-960	h.-961	h.-962	h.-963	h.-964	h.-965	h.-966	h.-967	h.-968	h.-969	h.-970	h.-971	h.-972	h.-973	h.-974	h.-975	h.-976	h.-977	h.-978	h.-979	h.-980	h.-981	h.-982	h.-983	h.-984	h.-985	h.-986	h.-987	h.-988	h.-989	h.-990	h.-991	h.-992	h.-993	h.-994	h.-995	h.-996	h.-997	h.-998	h.-999	h.-1000
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Time: 0.0°.

Time: 0.0.  
Sweep: 0.8 Mc to 11.4 Mc in five minutes.  
\*From 2300 through 0500, no values reported.



Peshewar, India (34.0°N, 71.5°E)

Time	h <sub>1</sub> F2	f <sub>o</sub> F2	h'F1	f <sub>o</sub> F1	h'F0	f <sub>o</sub> F0	h'F0	f <sub>o</sub> F0	h'F0	f <sub>o</sub> F0
00										
01										
02										
03										
04										
05										
06										
07										
08	300	7.8								
09	330	8.5								
10	360	9.3								
11	390	10.2								
12	390	11.2								
13	375	11.8								
14	360	11.7								
15	360	10.9								
16	360	10.6								
17	360	10.2								
18	330	9.7								
19	360	9.1								
20	360	8.4								
21	360	8.0								
22	375	7.4								
23	360	7.5								

Time: Local.  
Sweep: Manual operation.  
\*Height at 0.83 fP2.  
\*Data include "both normal and abnormal values."  
\*\*Median values, except F2-M3000, which are computed from average values.

**Tabla 35**

Bombay, India (19.0°N, 73.0°E)

Time	h <sup>1</sup> h <sup>2</sup>	h <sup>1</sup> h <sup>1</sup> h <sup>2</sup>	h <sup>1</sup> h <sup>1</sup> h <sup>2</sup>	h <sup>1</sup> h <sup>1</sup> h <sup>2</sup>	h <sup>1</sup> h <sup>1</sup> h <sup>2</sup>	h <sup>1</sup> h <sup>1</sup> h <sup>2</sup>	h <sup>1</sup> h <sup>1</sup> h <sup>2</sup>
00							
01							
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							

Time: Local.  
Sweep: Manual operation.  
\*Height at 0.83  $\sigma_{T2}$ .  
\*Median values, except P2-M3000, which are computed from average values.

Table 37

Madras, India (13.0°N, 80.2°E)

May 1946

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'E	f's	F2-M3000
00								
01								
02								
03								
04								
05								
06								
07	360	9.0						
08	420	10.4						2.5
09	420	10.8						
10	465	10.5						
11	540	10.4						2.4
12	465	10.4						
13	480	10.8						
14	450	11.3						
15	450	11.6						
16	465	12.4						2.4
17	450	12.4						
18	435	12.0						
19	(480)	(11.8)						
20	(480)	(11.3)						2.4
21	(435)	(10.6)						
22								
23								

Time: Local.

Sweep: Manual operation.

\*Height at 0.83 f'F2.

\*\*Median values, except F2-M3000, which are computed from average values.

Table 38

Peshawar, India (34.0°N, 71.5°E)

April 1946

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'E	f's	F2-M3000
00								
01								
02								
03								
04								
05								
06	300	8.3						
07	300	9.1				3.3		
08	300	10.1				3.4		3.0
09	360	11.2				3.5		
10	360	11.2				3.6		
11	360	11.8				3.6		
12	390	12.5				3.6		2.9
13	375	12.4				3.6		
14	390	12.6				3.6		
15	360	12.2				3.5		
16	360	11.6				3.4		2.8
17	330	11.2				3.4		
18	330	10.9				3.2		
19	330	9.6				3.2		
20	330	8.0				3.2		2.8
21	360	7.5				3.2		
22	390	7.1				3.2		
23	390	6.8						

Time: Local.

Sweep: Manual operation.

\*Height at 0.83 f'F2.

\*\*Data include both normal and abnormal values.

\*\*\*Median values, except F2-M3000, which are computed from average values.

Table 39

Falkland Is. (51.7°S, 57.7°W)

May 1946

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'E	f's	F2-M3000
00		3.0						2.5
01		3.0						
02		3.0						2.6
03		3.0						
04		2.9						2.8
05		3.0						
06		2.8						3.2
07		4.0						
08		4.7						3.2
09		8.0						3.6
10		8.8						3.2
11		9.4						3.2
12		8.8						3.2
13		8.4						2.8
14		7.8						2.5
15		8.0						2.4
16		6.2						3.3
17		5.0						
18		3.8						3.2
19		3.0						
20		2.8						2.8
21		2.8						
22		2.8						2.6
23		2.9						

Time: 50.0°N.

\*Extent of E. (See p. 3, last paragraph.)

Table 40

Delhi, India (28.6°N, 77.1°E)

April 1946

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'E	f's	F2-M3000
00	390	7.4						2.6
01	390	6.5						
02	360	5.5						
03	390	5.7						2.8
04	360	5.1						
05	360	5.8						
06	360	7.0						
07	360	8.3						2.7
08	360	9.7						
09	390	10.4						
10	420	11.6						2.8
11	420	12.6						
12	390	13.7						
13	360	(13.9)						
14	390	(14.0)						
15	420	(13.5)						
16	(390)	(13.4)						
17	(390)	(12.5)						
18	390	(12.0)						
19		(11.6)						
20								
21	390	8.2						
22	390	7.9						
23								

Time: Local.

Sweep: Manual operation.

\*Height at 0.83 f'F2.

\*\*Median values, except F2-M3000, which are computed from average values.

Table 42

APR 1 1976

April 1976

file	h'v2	q'v2	h'v1	q'v1	h'v	q'v	h'v2	q'v2
00								
01								
02								
03								
04								
05								
06								
07	315	9.2						
08	360	10.0						
09	420	11.1						
10	420	10.7						
11	450	10.0						
12	450	10.0						
13	450	11.8						
14	450	11.9						
15	450	11.6						
16	420	12.0						
17	420	11.8						
18	405	11.5						
19	405	11.0						
20	360	10.8						
21	360	10.0						
22	300	9.9						
23	300	9.4						

Time: local.  
Sweep: manual operation.  
\*Weight at C.E. for 2.

Time: Local.  
Sweep: Manual operation.  
Height at 0.82 fop2.

\*Median values, except F2-H200C, which are computed from average values.

\*Height at 0.03  $\rho_{p2}$ .  
\*Median values, except P2-112000, which are computed from average values.

Table 17 (supersedes Table 32, IPL-517) (LTI-517)

Chunckine, China (29.7°N, 106.90°E)

November 1975

TIME	H12	C02	H13	C03	H14	C04	H15	C05	DATE	TIME
00									2.8	
01										
02										
03										
04										
05										
06	310	4.6	230						(2.9)	3.0
07	255	7.8	230							3.0
08	250	8.4	230	4.5						3.0
09	265	16.0	230	1.5						3.2
10	265	10.8	215	4.7						3.0
11	265	11.0	208	4.9						3.0
12	270	11.4	215	5.0						2.8
13	265	13.0	224	1.9					(2.7)	(2.9)
14	262	13.0	224	4.6						3.0
15	240	11.8	228	4.4						3.0
16	230	11.2	230	4.4						3.0
17	230	9.4	224							3.2
18	226	7.4								3.0
19	250	7.0								2.8
20	265	6.0								3.0
21	260	5.4								2.9
22	278	4.6								3.0
23	310	4.6								2.8

Time: 120.0°T.  
Sweet: 16.0 Hr

Time: 120.0<sup>0</sup>L.  
Swee: 16.0 hr to 0.5 hr in fifteen minutes.

Time: 105.09.

Time: 105.0<sup>9</sup>l.  
Sweep: 3.3 Mc to 12.3 Mc in sixteen minutes.

Table 43 (Supersedes Table 37, IRPL-F17)

Chungking, China (29.4°N, 106.89°E) October 1945

Time	h'P2	h'P1	h'E	f'P2	f'P1	f'E	P2-M5000
00	300	5.0					(3.0)
01							
02							
03							
04							(4.5)
05	280	6.3					
06	240	5.4					(3.0)
07	240	7.7	210				
08	240	9.0	215				3.6
09	275	9.4	210	4.7			3.2
10	280	11.4	215	5.0			3.0
11	280	13.0	210	5.0			
12	285	13.5	204	5.0			
13	260	14.0	204	5.0			
14	260	13.0	212	4.9			
15	240	13.0	220	4.7			(3.0)
16	230	12.6	210	4.6			(3.0)
17	225	11.7	210				(3.3)
18	210	9.1					3.4
19	220	8.0					(3.0)
20	240	7.2					(3.1)
21	260	6.1					3.0
22	290	5.8					3.0
23	320	5.5					3.0

Time: 105.0°E.

Sleep: 3.3 Mc to 12.3 Mc in fifteen minutes.

Table 47 (Supersedes Table 29, IRPL-F15)

Chungking, China (29.4°N, 106.89°E) August 1945

Time	h'P2	h'P1	h'E	f'P2	f'P1	f'E	P2-M5000
00							
01							
02							
03							
04							
05	280	6.4					
06	280	7.2					
07	280	(7.5)					
08	280	(7.8)					
09	290	(9.2)					
10	310	(9.0)					
11							
12							
13							
14	320	(D)					
15	290	D					
16	275	D					
17	280	12.0					
18	260	9.8					
19	240	10.4					
20	260	9.0					
21	280	9.0					
22	300	7.8					
23	300	7.9					

Time: 105.0°E.

Sleep: 3.3 Mc to 12.3 Mc in fifteen minutes.

Table 46 (Supersedes Table 40, IRPL-F14)

Chungking, China (29.4°N, 106.89°E) September 1945

Time	h'P2	h'P1	h'E	f'P2	f'P1	f'E	P2-M5000
00							
01							
02							
03							
04	(250)						
05	280	(6.0)					3.9
06	240	7.6					3.8
07	240	7.0					3.7
08	270	7.8					3.7
09	310	8.0					3.3
10	320	8.3					(3.5)
11	305	12.6	5.2				3.6
12	280	13.0	5.3				3.5
13	260	14.0	5.0				3.6
14	230	12.0					3.9
15	230	12.0					3.8
16	240	11.2					3.8
17	240	9.7					3.9
18	240	8.3					3.5
19	240	7.4					3.3
20	290	6.4					3.1
21	290	6.0					3.1
22	310	6.1					3.1
23	310	6.1					3.1

Time: 105.0°E.

Sleep: 3.3 Mc to 12.3 Mc in fifteen minutes.

Table 48\*

San Francisco, California (37.4°N, 122.2°W) October 1943

Time	h'P2	h'P1	h'E	f'P2	f'P1	f'E	P2-M5000
00	255	5.8	238	3.2	112	2.3	2.7
01	239	5.3	255	2.8	112	1.9	3.5
02	230	4.2				1.7	3.4
03	248	3.1					3.0
04	268	2.8					3.1
05	278	2.8					3.0
06	283	3.0					3.1
07	286	3.2					3.0
08	271	3.1					3.1
09	271	3.1					2.6
10	272	3.1					2.7
11	272	3.1					2.8
12	269	3.2					2.9
13	266	3.2					3.1
14	267	3.2	300	2.3			3.1
15	271	4.5				1.4	2.9
16	296	5.1	247	2.9	130	1.9	2.8
17	310	5.5	229	3.7	118	2.3	3.3
18	318	5.5	222	3.9	116	2.7	3.4
19	318	5.7	210	4.0	113	2.9	3.6
20	311	6.1	212	4.0	110	2.9	4.4
21	300	6.3	230	4.0	110	3.0	3.5
22	300	6.1	234	3.9	112	2.9	3.2
23	277	6.1	240	3.6	112	2.6	3.2

Time: GMT

Sleep: 0.8 Mc to 12.0 Mc in six minutes.

\*Average values.

Table 62

San Francisco, California (37.4°N, 122.2°W)

September 1943

Time	hP2	fP2	hP1	fP1	hE	fE	P2-M3000
00	301	5.2	235	3.6	109	2.5	3.4
01	277	4.9	242	3.2	111	2.2	3.1
02	278	4.6	247	2.5	115	1.6	3.3
03	240	4.2					3.2
04	251	3.7					3.2
05	261	3.3					2.9
06	272	3.1					3.1
07	270	2.9					2.8
08	266	2.9					3.1
09	269	2.9					3.0
10	272	2.8					2.2
11	277	2.7					2.1
12	297	2.7					2.3
13	295	2.7					2.5
14	285	2.2	277	2.6	111	1.6	2.8
15	275	4.2	241	3.2	113	2.2	3.1
16	265	4.7	224	3.6	113	4.5	3.7
17	264	5.0	215	3.8	109	2.8	3.1
18	254	5.2	210	4.0	109	3.0	3.4
19	271	5.3	211	4.3	109	3.0	3.0
20	273	5.3	217	4.3	106	3.1	4.1
21	243	5.7	214	4.3	106	3.1	3.7
22	236	5.6	228	4.0	107	3.0	3.6
23	238	5.1	227	3.9	107	2.8	3.6

Time: GMT

Sweep: 0.8 Mc to 12.0 Mc in six minutes.

\*Average values.

Table 63

San Francisco, California (37.4°N, 122.2°W)

August 1942

Time	hP2	fP2	hP1	fP1	hE	fE	P2-M3000
00	300	4.9	235	3.9	109	2.7	2.9
01	298	4.9	246	3.6	112	2.4	3.6
02	298	4.9	258	3.1	117		3.1
03	256	4.6					3.7
04	260	4.5				1.5	3.1
05	266	3.7					3.9
06	286	3.2					3.1
07	293	3.0					3.1
08	287	2.9					3.0
09	281	2.9					3.0
10	285	2.8					2.9
11	281	2.7					2.8
12	280	2.6					3.0
13	286	2.4					3.1
14	288	3.6	250	2.8	114	1.1	2.8
15	283	4.0	239	3.4	111	2.2	3.1
16	267	4.5	223	3.7	108	2.6	2.9
17	271	4.7	224	3.0	106	2.9	2.7
18	274	5.0	220	4.0	109	3.0	4.6
19	271	5.0	220	4.1	109	3.0	4.6
20	276	5.2	225	4.2	107	3.0	4.4
21	273	5.1	232	4.2	110	3.0	4.0
22	273	5.1	235	4.1	108	3.0	4.1
23	256	4.9	232	4.0	108	3.0	2.9

Time: GMT

Sweep: 0.8 Mc to 12.0 Mc in six minutes.

\*Average values.

Table 64

San Francisco, California (37.4°N, 122.2°W)

July 1943

Time	hP2	fP2	hP1	fP1	hE	fE	P2-M3000
00	305	4.8	233	4.0	112	2.9	4.5
01	306	4.8	232	3.7	111	2.6	4.2
02	310	4.8	237	3.3	113		3.0
03	266	5.0	260			1.7	3.2
04	258	5.1					3.5
05	261	4.7					4.3
06	271	4.1					4.2
07	278	3.5					4.1
08	281	3.4					3.9
09	280	3.1					3.6
10	282	3.0					3.7
11	279	2.9					3.4
12	275	2.7					2.9
13	302	2.9	290	2.7	127	1.4	2.9
14	305	3.7	244	3.1	120	2.1	3.5
15	408	4.3	235	3.5	111	2.4	4.6
16	416	4.7	220	3.8	112	2.7	4.5
17	453	4.9	215	4.0	110	3.0	4.8
18	424	5.1	228	4.2	112	3.1	5.1
19	416	5.1	217	4.2	112	3.2	5.5
20	419	5.3	231	4.2	114	3.1	4.8
21	390	5.4	234	4.2	115	3.2	5.6
22	404	5.2	228	4.2	112	3.1	5.4
23	416	5.0	225	4.1	112	3.1	5.1

Time: GMT

Sweep: 0.8 Mc to 12.0 Mc in six minutes.

\*Average values.

Table 65

San Francisco, California (37.4°N, 122.2°W)

June 1943

Time	hP2	fP2	hP1	fP1	hE	fE	P2-M3000
00	370	5.6	235	4.1	112	2.9	4.2
01	346	5.4	235	3.8	113	2.6	4.4
02	313	5.3	237	3.4	114	2.2	4.6
03	274	5.6	250		130	1.6	4.2
04	256	5.8					3.7
05	262	5.3					4.0
06	267	4.5					3.4
07	283	3.9					3.9
08	291	3.6					3.3
09	298	3.4					3.3
10	290	3.3					3.6
11	291	3.2					3.8
12	296	3.1					3.6
13	310	3.3	270	2.4	110	1.4	3.3
14	305	4.2	248	3.3	123	2.1	3.8
15	360	4.8	230	3.7	115	2.4	4.5
16	376	5.2	225	4.0	113	2.8	4.6
17	393	5.5	222	4.2	113	3.0	5.5
18	400	5.4	226	4.2	112	3.1	5.1
19	435	5.5	216	4.3	111	3.2	5.1
20	398	5.5	215	4.3	110	3.1	5.1
21	385	5.7	228	4.3	112	3.1	5.3
22	377	5.8	224	4.2	112	3.1	5.1
23	370	5.7	234	4.2	111	3.1	4.3

Time: GMT

Sweep: 0.8 Mc to 12.0 Mc in six minutes.

\*Average values.



Table 53\*

May 1943

San Francisco, California (37.4°N, 122.2°W)

Time	h'F <sub>2</sub>	f°F <sub>2</sub>	h'F <sub>1</sub>	f°F <sub>1</sub>	h'E	f°E	f <sub>min</sub>	P <sub>2</sub> -M3000
00	358	5.3	223	4.0	112	2.9	4.1	3.1
01	321	5.2	229	3.8	113	2.5	4.0	3.3
02	290	5.3	240	3.3	116	2.1	4.0	3.2
03	250	5.5			130	1.6		3.3
04	243	5.3					4.2	3.3
05	248	4.9					4.2	3.3
06	263	4.1					3.8	3.2
07	291	3.7					4.0	3.1
08	289	3.7					4.0	3.1
09	278	3.6					3.5	3.1
10	275	3.4					3.2	3.1
11	278	3.2					3.8	3.2
12	279	3.1					3.5	3.2
13	277	3.2				1.6		3.2
14	331	4.0	240	3.3	124	2.1	3.6	3.2
15	379	4.6	229	3.7	115	2.5	3.8	3.0
16	368	5.2	220	3.9	113	2.8	4.0	3.0
17	366	5.5	224	4.2	112	3.0	4.4	3.1
18	420	5.4	213	4.3	112	3.1	4.3	2.9
19	406	5.6	204	4.3	111	3.2	5.1	2.9
20	420	5.8	211	4.3	111	3.2	4.7	2.8
21	410	5.9	220	4.3	111	3.2	4.6	2.9
22	388	5.8	223	4.3	111	3.2	4.4	3.0
23	361	5.5	231	4.2	112	3.1	4.1	3.1

Time: GMT

Sweep: 0.8 Mc to 12.0 Mc in six minutes.

\*Average values.

Table 55\*

March 1943

San Francisco, California (37.4°N, 122.2°W)

Time	h'F <sub>2</sub>	f°F <sub>2</sub>	h'F <sub>1</sub>	f°F <sub>1</sub>	h'E	f°E	f <sub>min</sub>	P <sub>2</sub> -M3000
00	268	6.8	233	3.8	111	2.7	3.5	3.3
01	244	6.5	238	3.2	113	2.3	3.3	3.4
02	226	5.9			105	1.7	3.0	3.4
03	231	4.5					3.1	3.3
04	237	3.6					2.8	3.3
05	257	3.1					2.8	3.2
06	271	3.1					2.9	3.1
07	270	3.2					2.7	3.1
08	267	3.2					2.8	3.0
09	283	3.2					2.7	3.0
10	273	3.3					2.8	3.0
11	274	3.3					2.7	3.0
12	268	3.4					2.6	3.1
13	272	3.4					2.8	3.1
14	262	3.6					2.9	3.2
15	253	4.9	246	3.2	124	1.9	3.1	3.4
16	277	5.6	229	3.6	113	2.5	3.4	3.3
17	294	6.0	226	4.1	112	2.8	3.6	3.3
18	310	6.3	223	4.3	111	3.1	3.9	3.1
19	323	6.8	220	4.4	110	3.2	4.6	3.1
20	311	7.3	225	4.4	109	3.3	4.2	3.1
21	305	7.5	229	4.4	110	3.2	4.2	3.1
22	296	7.6	232	4.4	110	3.2	4.0	3.2
23	282	7.3	231	4.2	112	3.0	3.7	3.3

Time: GMT

Sweep: 0.8 Mc to 12.0 Mc in six minutes.

\*Average values.

Table 54\*

April 1943

San Francisco, California (37.4°N, 122.2°W)

Time	h'F <sub>2</sub>	f°F <sub>2</sub>	h'F <sub>1</sub>	f°F <sub>1</sub>	h'E	f°E	f <sub>min</sub>	P <sub>2</sub> -M3000
00	308	6.2	234	3.9	113	2.8	3.4	3.2
01	280	6.0	234	3.5	113	2.4	3.4	3.3
02	250	5.8	242	3.1	128	1.9	3.1	3.3
03	240	5.6					2.8	3.3
04	249	4.8					2.8	3.3
05	265	4.1					2.8	3.2
06	282	3.6					2.9	3.0
07	292	3.5					3.0	2.9
08	287	3.5					2.7	2.9
09	289	3.5					2.9	3.0
10	283	3.4					2.7	3.0
11	277	3.3					2.7	3.0
12	280	3.0					2.5	3.0
13	287	3.0					2.8	3.1
14	274	3.7	242	2.9	135	1.8	3.0	3.1
15	327	4.8	234	3.5	121	2.3	3.2	3.1
16	364	5.3	228	3.8	118	2.7	3.5	3.1
17	359	5.8	223	4.0	117	2.9	3.7	3.0
18	348	6.0	219	4.3	115	3.1	3.8	3.0
19	378	6.1	216	4.4	117	3.2	3.9	2.9
20	359	6.5	217	4.4	115	3.2	3.7	3.0
21	361	6.6	215	4.4	116	3.3	3.9	3.0
22	345	6.6	223	4.3	116	3.2	4.7	3.0
23	320	6.5	225	4.1	115	3.1	3.6	3.1

Time: GMT

Sweep: 0.8 Mc to 12.0 Mc in six minutes.

\*Average values.

Table 56\*

February 1943

San Francisco, California (37.4°N, 122.2°W)

Time	h'F <sub>2</sub>	f°F <sub>2</sub>	h'F <sub>1</sub>	f°F <sub>1</sub>	h'E	f°E	f <sub>min</sub>	P <sub>2</sub> -M3000
00	240	6.2	229	3.4	113	2.4	3.4	3.5
01	226	5.5	237	3.0	126	2.0	3.0	3.5
02	221	4.4				1.5		3.3
03	237	3.5					3.1	3.3
04	243	3.2					2.8	3.3
05	252	2.9					3.1	3.3
06	262	3.1					3.2	3.3
07	256	3.2					3.1	3.3
08	248	3.2					3.0	3.2
09	252	3.1					2.9	3.2
10	253	3.1					2.9	3.2
11	252	3.1					2.7	3.2
12	254	3.1					2.9	3.2
13	259	3.1					2.7	3.2
14	260	3.1					2.7	3.2
15	244	4.2	223	3.3	131	1.6	2.8	3.3
16	239	5.6	226	3.8	119	2.2	3.1	3.5
17	247	5.9	226	3.8	114	2.6	3.4	3.4
18	274	6.3	230	4.2	114	2.9	3.5	3.3
19	288	6.8	225	4.2	113	3.1	4.0	3.2
20	274	7.0	226	4.3	113	3.1	3.9	3.3
21	277	7.1	222	4.3	115	3.1	4.0	3.3
22	270	6.7	231	4.2	115	3.0	3.5	3.3
23	259	6.5	225	3.9	112	2.8	3.5	3.4

Time: GMT

Sweep: 0.8 Mc to 12.0 Mc in six minutes.

\*Average values.

Table 57\*

San Francisco, California (37.4°N, 122.2°W) January 1943

Time	h <sup>1</sup> P2	f <sup>1</sup> P2	h <sup>1</sup> P1	f <sup>1</sup> P1	h <sup>1</sup> E	f <sup>1</sup> E	f <sup>1</sup> A	f <sup>2</sup> -M3000
00	226	5.6					3.3	3.5
01	217	4.8					3.3	3.6
02	226	3.3					3.1	3.5
03	255	2.7					3.5	3.4
04	244	2.5					3.6	3.5
05	261	2.4					3.7	3.4
06	266	2.4					3.2	3.3
07	276	2.7					3.3	3.1
08	266	2.8					3.1	3.2
09	259	2.9					2.9	3.3
10	253	3.1					3.4	3.4
11	244	3.0					3.0	3.5
12	242	2.8					3.1	3.5
13	256	2.7					3.0	3.2
14	261	2.7					3.0	3.2
15	249	3.2					2.8	3.5
16	230	5.2	233	2.7	122	2.1	3.0	3.5
17	240	5.7	219	3.3	120	2.4	3.2	3.5
18	245	5.7	218	3.7	116	2.8	3.6	3.3
19	260	6.5	222	3.9	116	2.9	3.6	3.3
20	258	7.2	218	4.0	116	3.0	3.5	3.3
21	255	7.1	212	4.0	114	3.0	3.4	3.4
22	249	6.4	220	3.9	113	2.9	3.4	3.5
23	246	6.2	217	3.5	114	2.6	3.5	3.4

Time: GMT  
Sleep: 0.8 Mc to 12.0 Mc in six minutes.  
\*Average values.

Table 59\*

Fairbanks, Alaska (64.9°N, 147.8°W) November 1941

Time	h <sup>1</sup> P2	f <sup>1</sup> P2	h <sup>1</sup> P1	f <sup>1</sup> P1	h <sup>1</sup> E	f <sup>1</sup> E	f <sup>1</sup> A	f <sup>2</sup> -M3000
00	348	2.2			100		4.9	
01	368	2.4			102		4.3	
02	368	2.6			101		4.1	
03	362	2.7			99		4.1	
04	354	2.7			100		3.8	
05	353	2.7			100	0.9		
06	345	2.7			99	1.0	2.6	
07	325	2.7			100	1.3	2.2	
08	282	3.7			102	1.4	2.6	
09	262	4.6	240	2.5	105	1.7	3.6	
10	268	5.2	258	2.7	104	1.9	2.8	
11	263	5.7	244	3.0	103	2.0	2.6	
12	256	6.2	244	3.0	104	2.0	2.7	
13	250	6.4	236	3.0	105	2.0	2.3	
14	245	6.2	215	3.4	102	1.8	2.2	
15	246	5.8	215	2.9	105	1.6	2.1	
16	255	5.2			109	1.4	2.2	
17	261	4.0			110	1.4	3.5	
18	269	2.9			109	1.3	2.5	
19	288	2.1			106	1.1	3.0	
20	301	1.9			104	0.9	3.7	
21	310	1.9			102	0.8		
22	316	2.1			103		4.7	
23	318	2.1			104		5.1	

Time: 150.0°W.  
Sleep: 16.0 Mc to 0.5 Mc in fifteen minutes.  
\*Average values.

Table 58\*

Fairbanks, Alaska (64.9°N, 147.8°W) December 1941

Time	h <sup>1</sup> P2	f <sup>1</sup> P2	h <sup>1</sup> P1	f <sup>1</sup> P1	h <sup>1</sup> E	f <sup>1</sup> E	f <sup>1</sup> A	f <sup>2</sup> -M3000
00	323	2.0			100		4.2	
01	331	2.2			99		4.0	
02	342	2.4			100		4.1	
03	341	2.8	145	3.1	97	2.1		
04	329	2.7			98		3.8	
05	324	2.8			98		3.4	
06	323	2.8			98		2.8	
07	298	2.7			99	1.2	2.5	
08	296	2.8			100	1.3	2.2	
09	255	3.9			102	1.5	2.2	
10	236	5.1	215	3.2	103	1.7	2.4	
11	232	5.9	210	3.2	100	1.8		
12	230	6.6	238	3.0	100	1.8	2.1	
13	231	7.0	235	3.1	99	1.7	1.9	
14	225	6.4			100	1.5	1.4	
15	221	5.6			103	1.3	1.3	
16	236	4.7			104	1.3	1.4	
17	246	3.3			103	1.0	1.8	
18	258	2.4			102	1.0	1.9	
19	275	2.0			100	2.3		
20	297	1.8			100	2.2		
21	302	1.8			101	3.0		
22	309	1.8			104	3.6		
23	314	1.9			101	3.8		

Time: 150.0°W.  
Sleep: 16.0 Mc to 0.5 Mc in fifteen minutes.  
\*Average values.

Table 60\*

Fairbanks, Alaska (64.9°N, 147.8°W) October 1941

Time	h <sup>1</sup> P2	f <sup>1</sup> P2	h <sup>1</sup> P1	f <sup>1</sup> P1	h <sup>1</sup> E	f <sup>1</sup> E	f <sup>1</sup> A	f <sup>2</sup> -M3000
00	321	2.4			101	0.9	4.4	
01	313	2.3			103		4.4	
02	329	2.3			101		4.6	
03	343	2.6			100		4.4	
04	342	2.6			98	1.3	4.3	
05	325	2.6			98	1.4	3.6	
06	296	2.9			103	1.4	3.3	
07	268	3.7			109	1.7	3.5	
08	267	4.5	235	3.1	109	2.0	4.2	
09	284	5.1	236	3.4	108	2.3	2.6	
10	291	5.6	231	3.5	108	2.4	2.7	
11	277	6.1	226	3.6	108	2.5		
12	273	6.2	230	3.5	106	2.4		
13	273	6.3	234	3.5	105	2.4	2.8	
14	258	6.4	227	3.3	104	2.2	3.0	
15	257	6.2	230	3.0	108	2.0	2.4	
16	245	6.1			108	1.7	3.7	
17	243	5.5			107	1.4	2.8	
18	253	4.5			107	1.2	3.6	
19	262	3.5			106	1.0	3.5	
20	273	2.8			109	1.0	3.7	
21	280	2.5			104	1.6	4.6	
22	289	2.4			105	4.9		
23	302	2.4			104	5.2		

Time: 150.0°W.  
Sleep: 16.0 Mc to 0.5 Mc in fifteen minutes.  
\*Average values.

Table 61\*

Fairbanks, Alaska (64.9°N, 147.8°W)

September 1941

Time	h'P2	f'P2	h'P1	f'P1	h'E	f'E	fPa	P2-M3000
00	313	2.8			100	1.0	5.2	
01	343	3.0			99	1.0	5.1	
02	338	3.0			100	1.2	4.9	
03	332	2.9			99	1.2	5.2	
04	319	3.0			99	1.4	4.1	
05	292	3.3			102	1.4	4.6	
06	312	3.9	251	3.2	105	2.0	3.8	
07	348	4.3	220	3.4	107	2.3	4.0	
08	350	4.5	228	3.8	107	2.5	2.6	
09	355	4.8	223	3.9	108	2.7	2.8	
10	371	5.1	223	4.1	108	2.8	3.6	
11	368	5.3	221	4.2	108	2.9	3.1	
12	355	5.3	219	4.1	107	2.8	2.9	
13	347	5.4	227	4.1	108	2.8	3.2	
14	311	5.4	228	3.9	108	2.6	2.7	
15	291	5.4	229	3.7	113	2.3	3.1	
16	284	5.3	234	3.4	113	1.9	3.6	
17	269	5.2	232	2.8	110	1.7	3.6	
18	265	4.8			112	1.7	3.4	
19	275	4.1			108	1.3	4.4	
20	281	3.5			105	1.2	3.5	
21	282	3.4			105	1.1	3.1	
22	281	3.0			102	1.0	3.7	
23	295	2.8			101	1.0	5.2	

Time: 150.0°.

Sweet: 16.0 Mc to 0.5 Mc in fifteen minutes.

\*Average values.

Table 62\*

Fairbanks, Alaska (64.9°N, 147.8°W)

July 1941

Time	h'P2	f'P2	h'P1	f'P1	h'E	f'E	fPa	P2-M3000
00	291	3.7			109	1.3	5.8	
01	302	3.9			105	1.3	5.2	
02	312	4.3	300	2.4	104	1.6	5.5	
03	310	4.4	249	3.0	102	1.7	5.0	
04	327	4.7	245	3.3	101	2.0	4.8	
05	364	5.0	238	3.6	101	2.4	4.0	
06	366	5.1	213	3.8	101	2.6	4.8	
07	409	5.1	209	3.9	100	2.7	4.8	
08	422	5.1	246	4.1	102	2.8	4.1	
09	422	5.2	207	4.2	101	3.0	4.2	
10	442	5.2	206	4.3	101	3.0	4.3	
11	458	5.3	203	4.3	103	3.0	4.6	
12	457	5.2	206	4.3	103	3.1	3.5	
13	430	5.2	207	4.4	102	3.0	4.1	
14	418	5.2	204	4.3	102	3.0	4.5	
15	435	5.1	217	4.3	104	2.9	5.0	
16	403	5.1	214	4.2	106	2.8	3.4	
17	360	5.1	215	4.0	107	2.6	3.4	
18	318	5.1	228	3.7	109	2.4	3.1	
19	388	5.0	234	3.3	109	2.2	6.0	
20	276	5.0	253	3.1	111	1.8	2.6	
21	263	4.6	253	3.2	109	1.6	3.8	
22	267	4.4	400	3.0	111	1.3	3.5	
23	297	3.6			108	1.2	5.2	

Time: 150.0°.

Sweet: 16.0 Mc to 0.5 Mc in fifteen minutes.

\*Average values.

Table 62\*

Fairbanks, Alaska (64.9°N, 147.8°W)

August 1941

Time	h'P2	f'P2	h'P1	f'P1	h'E	f'E	fPa	P2-M3000
00	292	3.8			105	1.2	5.2	
01	303	3.7			104	1.4	4.7	
02	304	3.7			103	1.4	3.7	
03	307	3.7	220	1.8	103	1.3	3.7	
04	326	4.2	260	2.8	102	1.8	3.5	
05	349	4.5	244	3.3	102	2.0	3.9	
06	373	4.6	231	3.7	104	2.4	5.0	
07	379	5.0	218	3.9	106	2.5	4.2	
08	417	5.1	218	4.1	105	2.8	3.5	
09	409	5.4	213	4.2	106	2.9	3.7	
10	406	5.5	206	4.3	106	2.9	7.1	
11	390	5.6	210	4.4	104	3.0	3.8	
12	389	5.6	210	4.4	106	3.0	5.2	
13	368	5.5	212	4.4	105	3.0	4.9	
14	364	5.4	214	4.3	106	2.9	4.4	
15	375	5.4	218	4.2	107	2.8	3.4	
16	337	5.4	219	4.0	110	2.6	4.9	
17	300	5.2	225	3.7	110	2.4	4.7	
18	296	5.1	239	3.3	112	2.1	4.0	
19	284	4.6	258	3.0	114	1.8	4.2	
20	283	4.3			114	1.5	4.4	
21	275	4.3			109	1.2	5.3	
22	279	4.1			108	1.1	5.5	
23	289	3.8			107	1.1	5.1	

Time: 150.0°.

Sweet: 16.0 Mc to 0.5 Mc in fifteen minutes.

\*Average values.





TABLE 65

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

## IONOSPHERIC DATA

f<sup>o</sup>F<sub>2</sub> Mc

(Unit)

October 28, 1946

(Month)

Washington, D. C.

Observed at

Lat 39.0°N Long 77.5°W

National Bureau of Standards

(Institution)

J. L. S.

Scaled by: A. K. B.

Calculated by: A. M. K.

B. W. D.

Observed at		Washington, D. C.										J. L. S.												
		Long 77.5°W										A. M. K.												
		Lat 39.0°N										B. W. D.												
		75° W										Mean Time												
Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	4.44	4.42	3.9	3.9	3.50A	3.8F	4.44	4.63C	7.9C	9.0C	9.6	10.0C	10.4	10.6C	10.5	9.8	10.2	C	C	C	7.0	6.4C	5.4	5.0
2	4.9	5.0	4.9	4.0	3.55F	3.4C	4.6	7.0	8.6	9.2	10.0	10.6	11.1C	11.5	11.2	10.7	11.0	C	C	C	7.2	6.3	6.2	6.0
3	6.0	5.6	5.3	5.1	5.0	4.9	5.1	7.1	8.6	9.0	9.8	11.2	11.0	11.3	11.0	10.6	10.0	9.3	8.9	7.6	7.4	6.8	6.4	6.0
4	5.9	5.6	5.5	5.5	4.9	C	C	C	8.8	9.6	10.4	10.6	11.0	11.5	11.3	10.5	10.5	10.2	9.2	8.0	6.8	6.2	6.0	5.5C
5	5.3	5.7	5.6	4.7	3.8	3.4	4.3	6.8	8.0	9.4	9.7	10.0C	10.5	11.4	11.0	10.9	9.8	9.2	8.8	7.0	6.4	6.0	6.1	5.6
6	5.5	5.4	5.2	4.8	3.8	3.2	4.1	6.8	9.4	9.0C	9.2	9.9	10.6	11.0	10.7	10.9	10.8	10.3	9.0	8.8	6.4	6.2	6.1	5.7
7	6.0	5.4	4.9	4.6	4.3	3.7	4.1	7.5	8.1	9.0	9.4	C	C	C	C	C	11.0	10.2	8.9C	7.5	6.8	6.4	6.0	5.8
8	5.4	4.9	4.8	4.7	3.7F	3.7F	4.6	7.0	7.7	9.0	9.4	11.0	10.5	10.8	11.0	10.4	C	C	7.4	6.4	6.0	5.7	5.5	
9	5.2	5.3	5.0	4.6	4.2	3.4F	3.6F	5.8	7.3	8.7	9.0	10.4	11.0	10.6	10.7	10.2	9.7C	9.0	8.2C	7.0	6.4	6.5	5.8	5.5
10	5.4	5.0	4.6	4.2	3.6	3.3	3.9	7.1	8.6	9.4	10.1	10.6	11.5	11.3	11.3	11.2	10.8C	10.0	9.3C	8.0	7.0	6.2	6.2	5.7
11	5.4	5.1	5.0	4.8	3.9	4.0	4.3	7.2	8.8	10.0C	10.5	11.0	11.5	11.6	11.5	11.5	11.3	C	C	8.0C	7.0	6.0	5.5	5.3
12	5.3	5.1	4.9	5.0	4.8	4.4	4.3	6.4	8.0	9.2	9.9	10.6	11.1	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	8.2	C	C	C	C	C	10.4	C	C	C	C	C	C	C	C	C	C	C
14	6.2	C	C	C	C	C	5.0	C	C	C	C	C	10.6	C	C	C	C	C	C	C	C	C	C	C
15	5.0	C	C	C	C	C	4.5	C	C	C	C	C	10.8	C	C	C	C	C	C	C	C	C	C	C
16	5.9	5.7	5.5	5.4	5.2C	5.2	5.5	7.8	9.0	10.4	11.2	C	C	C	C	C	C	C	C	C	C	6.2	6.0	5.7
17	6.2	6.0	5.9	5.2	5.1	4.9	5.2	8.4	9.8	10.7	11.5	C	C	C	C	C	C	C	8.2	7.0	6.6	6.3	6.0	5.7
18	5.8	5.8	5.8	5.8	5.2	4.6	4.7	7.7	9.0	C	C	C	C	C	C	C	C	C	C	8.0	6.4	6.4	5.8	5.8
19	5.9	5.7	5.4	5.0	4.7	4.2	4.8	7.6	9.7C	10.8	11.2	C	C	C	C	C	C	C	C	C	C	C	C	C
20	C	5.2	5.6	5.4	4.9C	4.9	4.6	4.7	8.2	10.5C	C	C	C	C	C	C	C	C	C	C	C	6.5C	6.2F	5.9
21	5.4C	5.0	5.5	5.1	4.5	3.6	4.1	7.6	10.2C	11.5C	11.4	C	C	C	C	C	C	C	C	C	7.6	6.8	6.2	6.0
22	5.6	5.8	5.8	C	C	C	C	8.0	9.2	10.9	11.5	C	C	C	C	C	C	C	C	C	7.5	6.7	C	C
23	5.3	5.4	5.3	5.0	4.9	5.0	5.4	7.5	10.4	11.3	C	C	C	C	C	C	C	C	C	7.6	7.0	6.7	C	C
24	C	C	C	C	C	C	C	C	11.0	C	C	C	C	C	C	C	C	C	C	C	8.2	7.0	6.4	6.4
25	6.3	5.6	5.4	5.3	5.1	4.8	5.0	7.6	9.4	C	C	C	C	C	C	C	C	C	C	7.5C	7.1C	7.0C	6.8	6.8
26	6.4	6.8	5.9	5.6	5.3	5.3	5.9	8.2	9.0	11.5	C	C	C	C	C	C	11.0C	10.8	9.5C	7.2	7.0	6.4	6.1	5.7
27	4.2	3.7	3.7	3.6F	3.7C	2.9F	3.2F	5.7	7.2	9.2	9.4	10.5	11.0	11.4	11.0	C	C	7.0	6.0	6.0	5.2	5.1	4.8	4.8
28	4.6	3.6	3.4	3.8F	3.6	2.3F	3.3F	6.6	9.2	10.8	11.5	C	C	13.4	13.7	12.8	9.9C	8.5C	7.6	7.0	6.4	6.0	5.6	5.6
29	5.6	5.6	5.3	5.3	4.7	4.3	3.8	7.0	10.0	10.6	11.1	11.4	12.8	12.5	12.3	12.4C	11.1	11.2	9.4C	8.1	6.4	6.2	5.8	5.5
30	5.5	5.4	5.3	5.2	5.2	4.9	4.7	7.1	9.0	10.1	11.1	11.4	11.6	C	C	11.5	11.3	10.3C	8.7	7.4	6.8	6.2	5.7	5.1
31	5.0	4.7	4.8	4.4	3.7	3.1F	3.6	6.9	10.0	10.0C	11.4	11.5	12.8	12.9	C	C	C	C	C	9.0	7.2	6.8	6.2	5.6
Median	5.4	5.4	5.3	4.8	4.4	3.8	4.6	7.1	9.0	10.0	10.4	11.4	11.5	11.5	11.4	11.3	11.0	10.2	8.9	7.7	7.0	6.4	6.0	5.7
Count	28	27	27	26	25	25	28	26	26	25	24	25	26	22	19	21	16	11	11	18	24	27	26	26

Sweep 7.2 Mc to 11.5 Mc in 3.4 min

Manual ☐ Automatic ☒

\* Starred values obtained by addition on October 28 of a top band to recorder, extending the sweep to 16.0 Mc.



TABLE 66  
Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

National Bureau of Standards

Scaled by A. K. B. (Institution) J. L. S.

f<sup>o</sup>F2 MC October 1946

(Unit)

(Month)

Observed at Washington, D. C.

Lat. 39.0°N, Long. 77.5°W

Day		75°W												Mean Time												A. M. K.				B. W. D.			
		0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330								
1	44	41	35	32	30	27	55	70	86	98	98	102	106	106	102	100	102	C	C	C	C	59	52	50									
2	49	49	46	38	35	35	60	80	88	96	107	110	114	115	112	113	106	C	C	C	C	60	61	60									
3	58	52	52	50	50	46	60	80	91	95	107	110	114	115	112	113	106	97	80	76	68	68	61	57									
4	56	55	55	53	44	C	C	C	C	93	100	103	108	110	115	112	106	97	80	76	68	68	61	57									
5	53	56	55	53	43	33	56	77	88	96	90	106	115	113	111	106	100	92	80	76	66	60	56	54									
6	54	52	52	45	35	33	55	72	88	91	97	100	108	106	110	110	107	97	85	72	66	63	59	58									
7	57	49	44	46	41	37	57	84	85	C	C	C	C	C	C	110	104	92	72	66	63	59	58										
8	50	50	44	40	38	37	58	80	87	90	104	109	102	110	110	104	92	72	66	63	59	58	57										
9	53	50	42	46	38	29	48	62	76	91	100	110	110	109	108	102	93	73	66	63	59	58	57										
10	50	48	42	38	33	29	53	80	92	96	101	112	112	112	110	104	92	72	66	63	59	58	57										
11	53	52	49	42	40	37	56	82	89	92	105	112	114	115	115	114	112	104	90	85	74	65	57	55									
12	52	50	49	50	45	38	53	74	90	99	100	107	C	C	C	C	C	C	C	C	C	C	C	C									
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C									
14	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C									
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C									
16	56	57	53	52	51	49	71	85	100	107	115	D	D	D	D	D	C	84	72	66	63	59	58	57									
17	61	58	57	51	50	49	70	87	96	96	115	D	D	D	D	D	C	C	C	C	C	C	C	C									
18	60	59	58	56	50	44	60	82	92	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C									
19	58	56	52	49	43	43	62	90	100	106	113	115	115	116	C	D	C	C	C	C	C	C	C	C									
20	64	52	49	49	47	45	66	95	102	D	D	D	D	D	D	C	C	C	C	C	C	C	C	C									
21	53	57	53	52	52	52	55	90	108	115	115	D	D	C	D	C	C	C	C	C	C	C	C	C									
22	58	60	54	C	C	C	64	90	103	111	D	D	C	C	D	D	C	C	C	C	C	C	C	C									
23	55	55	52	50	50	49	64	88	110	C	C	C	D	C	C	C	C	C	C	C	C	C	C	C									
24	C	C	C	C	C	C	C	C	C	C	C	C	D	C	C	C	C	C	C	C	C	C	C	C									
25	63	55	54	51	46	48	61	83	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C									
26	68	64	58	56	53	57	69	86	105	C	C	C	C	D	C	C	110	109	102	85	72	66	63	59	58								
27	35	34	34	34	34	34	43	65	77	88	99	108	109	113	113	C	C	C	C	C	C	C	C	C									
28	43	35	34	38	38	38	49	70	80	90	100	108	109	113	113	C	C	C	C	C	C	C	C	C									
29	57	45	40	44	40	37	50	80	90	100	112	118	120	121	121	115	115	105	91	85	74	65	57	55									
30	53	54	53	53	50	47	57	81	99	103	110	115	C	C	C	C	C	C	C	C	C	C	C	C									
31	49	47	42	40	33	31	49	85	98	103	108	112	112	112	C	C	C	C	C	C	C	C	C	C									
Median	54	52	52	46	40	37	57	82	92	100	107	112	115	115	114	111	104	96	83	73	66	62	59	56									
Count	27	27	27	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26									

Sheep 0.75 Mc to 1.5 Mc in 34 min

Manual ☐ Automatic ☒

\* Starred values obtained by addition on October 28 of a top band to recorder, extending the sweep to 16.0 Mc.

TABLE 67

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

## IONOSPHERIC DATA

h'F<sub>1</sub> (Characteristic) km October 1946  
 Observed at Washington, D. C.  
 Lat 39.0° N, Long 77.5° W

Form adopted June 1946

National Bureau of Standards

(Institution)

J.L.S.

Scaled by: A.K.B.

Calculated by: A.M.K.

B.W.D.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1										C	200	[230] <sup>C</sup>	220	[210] <sup>C</sup>	220	230	240							
2										210	210	210	230	210	220	220	240							
3									220	220	190 <sup>H</sup>	200 <sup>H</sup>	200 <sup>H</sup>	210	210	220	230							
4									C	220 <sup>H</sup>	220	200 <sup>H</sup>	210 <sup>H</sup>	210 <sup>H</sup>	220	220								
5									220	220	[220] <sup>B</sup>	[210] <sup>B</sup>	210	220	220	220	210							
6									210	210 <sup>H</sup>	220	210	240	210	230	220	C							
7										C	C	C	C	C	C	C	220							
8									210	220	200	210 <sup>H</sup>	210 <sup>H</sup>	220	220	230	220							
9										220	220	210 <sup>H</sup>	210 <sup>H</sup>	220	220 <sup>H</sup>	230	230							
10										230	210 <sup>H</sup>	210	220	220	240	230								
11										C	230	210	A	A	A	C	A							
12									230	210	220	[220] <sup>H</sup>	210	C	C	C	C							
13									C	C	C	C	C	C	C	C	C							
14									C	C	C	C	C	C	C	C	C							
15									C	C	C	C	C	C	C	240	230							
16									C	C	210	220	220	230	220	230								
17										230	230	[220] <sup>C</sup>	220	220	230	230	A							
18										C	C	C	C	C	C	C								
19										A	220	220	[220] <sup>H</sup>	[220] <sup>H</sup>	230	A								
20										220	210	220	210	220										
21										230	*	210	C	C	C	C								
22									220	(210)	C	C	C	C	C									
23										C	C	C	210	C	C									
24										C	230	210	220											
25										C	C	C	C	C	C	C								
26										(240)	220	C	C	C	C									
27										230	(230)	[230] <sup>C</sup>	230	230	230	230								
28										220	210 <sup>H</sup>	200 <sup>H</sup>	[220] <sup>H</sup>											
29										210	*	220	220	220	220	230								
30									230	220	200	210	200 <sup>H</sup>	C	C									
31										B	220	220	220	220	220									
Median									220	220	220	210	220	220	220	230	230							
Count								7	16	22	22	22	21	16	15	13	8							

Sweep 0.15 Mc to 1.5 Mc in 3.4 min

Manual ☐ Automatic ☒\* No evidence of F<sub>1</sub> layer appearing on record.

TABLE 68  
Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

Notional Bureau Of Standards  
(Institution)

J.L.S.

Scaled by: A.K.B.

Calculated by: A.M.K.

B.W.D.

f°F1  
(Characteristic)

M.C.  
(Unit)

October, 1946  
(Month)

Washington, D. C.

Lat 39.0° N, Long 77.5° W

IONOSPHERIC DATA

75° W

Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1										C	L	C	5.5	[4.9]C	4.8	L	L							
2										L	(4.9)	[5.0]H	(5.0)	(4.9)	4.9	L	L							
3										L	4.9H	5.1H	[4.8]H	5.0	L	L	L							
4										C	4.9H	LH	(5.0)H	LH	L	L	L							
5										L	L	[5.0]L	[5.0]L	4.8	L	L	L							
6										L	LH	L	5.0	[4.9]L	L	L	L							
7										C	C	C	C	C	C	C	L							
8										L	L	L	LH	L	L	L	L							
9										L	L	[5.0]H	[4.9]H	(5.0)	LH	L	L							
10										L	LH	5.0	[5.0]L	5.0	L	L	L							
11										C	L	[4.8]H	(5.0)	A	A	C	A							
12										L	L	L	L	C	C	C	C							
13										C	C	C	C	C	C	C	C							
14										C	C	C	C	C	C	C	C							
15										C	C	C	C	C	C	C	L							
16										C	L	L	L	L	L	L	L							
17										L	L	C	C	L	L	L	L							
18										C	C	C	C	C	C	C	C							
19										L	L	L	L	L	A	L	L							
20										L	L	L	L	L	L	L	L							
21										L	*	L	C	C	C	C	C							
22										C	C	C	C	C	C	C	C							
23														L	C	C	C							
24											L	L	L	L	C	C	C							
25										C	C	C	C	C	C	C	C							
26											L	L	L	C	C	C	C							
27										L	L	L	L	L	L	L	L							
28										L	LH	LH	LH											
29										L	L	*	L	L	L	L	L							
30										L	(4.0)	L	LH	C	C	C	C							
31										L	L	L	L	L	L	L	L							
Median										L	L	(5.0)	(5.0)	4.9	L	L	L							
Count										3	6	9	7	2										

Sweep 0.75 Mc to 11.5 Mc in 3.4 min

Manual ☐ Automatic ☒

\* No evidence of F1 layer appearing on record.



TABLE 69

Control Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

h'E \_\_\_\_\_ km \_\_\_\_\_ October 1946  
(Characteristic) (Unit) (Month)

Observed at \_\_\_\_\_ Washington, D. C.

Lat 39.0°N, Long 77.5°W

## IONOSPHERIC DATA

National Bureau of Standards

Scaled by: A.K.B. (Institution) J.L.S.

Calculated by: A.M.K. B.W.D.

Day	75° W										Mean Time													
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							C	C	110	110	100	100	100	100	100	100	100	100						
2							C	120	110	110	100	100	100	100	100	100	100	100						
3							C	110	110	110	110	110	110	110	110	110	110	110						
4							C	C	C	110	110	110	110	110	110	110	110	110						
5							110	100	110	110	110	110	110	110	110	110	110	110						
6							110	100	110	100	100	100	100	100	100	100	100	100						
7							110	110	C	C	C	C	C	C	C	C	110	110						
8							120	110	110	100	100	100	100	100	100	100	110	120						
9							110	110	110	100	100	100	100	100	100	100	100	100						
10							110	100	100	100	100	100	100	100	100	100	100	100						
11							110	110	110	110	100	100	100	100	100	100	100	100						
12							C	110	110	100	100	100	C	C	C	C	C	C						
13							C	C	C	C	C	C	C	C	C	C	C	C						
14							C	C	C	C	C	C	C	C	C	C	C	C						
15							C	C	C	C	C	C	C	C	C	C	100	110						
16							C	120	110	110	100	100	100	100	100	100	100	100						
17							120	110	110	100	100	100	100	100	100	100	100	100						
18							110	110	C	C	C	C	C	C	C	C	100	100						
19							C	100	110	110	100	100	100	100	100	100	100	100						
20							120	100	100	100	100	100	100	100	100	100	100	100						
21							110	100	110	100	100	100	100	100	100	100	100	100						
22							C	110	110	100	100	100	100	100	100	100	100	100						
23							(110)	100	100	100	100	100	100	100	100	100	100	100						
24							C	C	C	110	100	100	100	100	100	100	100	100						
25							110	100	C	C	C	C	C	C	C	C	100	100						
26							110	110	110	110	110	110	110	110	110	110	110	110						
27							(130)	110	110	110	110	100	100	100	100	100	100	100						
28							(120)	110	110	110	110	100	100	100	100	100	100	100						
29							(100)	110	110	110	100	100	100	100	100	100	100	100						
30							(120)	110	110	100	100	100	100	100	100	100	100	100						
31							C	110	110	110	110	110	110	110	110	110	110	110						
Median							110	110	110	100	100	100	100	100	100	100	100	100						
Count							1	24	24	25	25	25	25	24	24	25	28	19						

Sweep 0.75 Mc to 11.5 Mc in 3.4 min

Manual ☐ Automatic ☒

TABLE 70

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

Observed at Washington, D. C.  
 Lot 390° N, Long 77.5° W  
 f<sup>o</sup>E MC (Unit) October, 1946  
 (Characteristic) Washington, D. C.

National Bureau  
 of Standards  
 Scaled by: A. K. B. (Institution) J. L. S.  
 Calculated by: A. M. K. B. W. D.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							C	C	(2.9)	C	A	C	[3.7] <sup>c</sup>	[3.5] <sup>c</sup>	3.5	[3.3] <sup>c</sup>	[2.8] <sup>a</sup>							
2							C	2.3	2.8	[3.0] <sup>c</sup>	[3.2] <sup>c</sup>	C	C	C	C	C	2.6	2.2						
3							C	2.2	2.8	[3.1] <sup>c</sup>	(3.3)	C	C	C	C	C	2.7	2.2						
4							C	C	C	C	A	C	C	C	C	(2.9)	2.6	[1.9] <sup>c</sup>						
5								2.2	2.7	3.0	B	B	C	C	C	2.9	[2.5] <sup>a</sup>	1.9 <sup>a</sup>						
6								(2.2)	2.7	(3.1)	3.2	[3.4] <sup>c</sup>	(3.5)	(3.4)	[3.2] <sup>c</sup>	(3.0)	(2.6)	C						
7								2.0 <sup>a</sup>	2.6	C	C	C	C	C	C	C	2.5	(1.8)						
8								(2.2)	[2.7] <sup>a</sup>	(2.9)	[3.2] <sup>a</sup>	[3.4] <sup>c</sup>	[3.3] <sup>c</sup>	[3.4] <sup>c</sup>	[3.2] <sup>c</sup>	(2.9)	2.6 <sup>a</sup>	1.8						
9								2.1	(2.5)	(3.0)	[3.3] <sup>c</sup>	[3.5] <sup>c</sup>	[3.5] <sup>c</sup>	3.4	(3.3)	2.9	2.5	A						
10								2.0	2.6	2.9	[3.2] <sup>c</sup>	[3.4] <sup>c</sup>	[3.5] <sup>c</sup>	C	C	A	A	A						
11								A	A	C	A	A	A	A	A	C	A	A						
12								C	(2.1)	[2.6] <sup>a</sup>	(2.9)	C	A	3.6	C	C	C	C						
13								C	C	C	C	C	C	C	C	C	C	C						
14								C	C	C	C	C	C	C	C	C	C	C						
15								C	C	C	C	C	C	C	C	C	2.6	1.8						
16								C	1.9 <sup>a</sup>	(2.7)	C	C	C	C	C	C	[2.5] <sup>a</sup>	(2.0)						
17								2.2	2.8	C	C	C	C	C	C	A	A	A						
18								A <sup>a</sup>	(2.7)	C	C	C	C	C	C	C	(2.7)	A						
19								C	A	A	3.4	[3.5] <sup>a</sup>	A	A	A	A	(2.4)	A						
20								[2.1] <sup>a</sup>	2.8	[3.4] <sup>a</sup>	[3.5] <sup>a</sup>	3.5	3.5	3.5	3.3	3.1	(2.5)	A						
21								A	(3.1) <sup>a</sup>	(3.4) <sup>a</sup>	(3.5) <sup>a</sup>	3.5 <sup>a</sup>	C	C	C	C	(1.8)							
22								[1.9] <sup>a</sup>	2.3	C	C	C	C	C	C	[3.1] <sup>a</sup>	2.4	A						
23								1.8 <sup>a</sup>	[2.6] <sup>c</sup>	[3.0] <sup>c</sup>	(3.3)	3.5	3.5	C	C	C	A	A						
24								C	C	3.1	3.4	3.6	3.5	(3.5)	C	A	A	A						
25								2.0	2.7	C	C	C	C	C	C	C	2.5							
26								2.1	2.7	(2.8)	C	C	C	C	C	2.9	2.4 <sup>a</sup>	C						
27								2.0	C	C	C	C	(3.4)	(3.5)	[3.2] <sup>c</sup>	2.9	(2.5)	(1.8)						
28								1.9	[2.3] <sup>c</sup>	2.9	C	C	(3.4)	C	C	C	2.4	A						
29								2.0	(2.5)	(2.9)	3.3	3.4	3.5 <sup>a</sup>	(3.5)	3.3	2.9	2.4	1.8						
30								(1.9)	2.6	2.9	[3.1] <sup>c</sup>	3.3	3.4	[3.4] <sup>c</sup>	[3.2] <sup>c</sup>	2.9	(2.4)	1.6 <sup>a</sup>						
31								1.8 <sup>a</sup>	2.5	[3.0] <sup>b</sup>	(3.3)	[3.4] <sup>b</sup>	3.5	3.5	[3.2] <sup>b</sup>	(2.8)	(2.4)	C						
Median								2.0	2.7	(3.0)	(3.3)	3.4	3.5	(3.5)	(3.2)	2.9	2.5	1.8						
Count								21	32	17	17	12	14	10	9	13	22	13						

Sweep 0.75 Mc to 1.5 Mc in 3.4 min

Manual ☐ Automatic ☒

# TABLE 71

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

## IONOSPHERIC DATA

National Bureau of Standards

Solved by: A. K. B. (Institution) J. L. S.

Calculated by: A. M. K. B. W. D.

Es (Characteristics) Mc. km October 1946

Observed at Washington, D. C.

Lat. 39.0° N Long. 77.5° W

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	23 110			29 120	39 120	40 110	23 110	23 110	40 100		38 100	38 100	38 100	36 140	37 140	38 120	29 120	C	C	C	C	17 130		23 110
2	23 110						27 110	22 110	25 110		38 100	37 130				37 100	36 120	37 100	23 100	23 100				
3																	27 130	23 120						
4																	27 130	23 120						
5																	27 130	23 120						
6	19 110	16 140		38 110	35 100	38 110	29 110	28 100			36 120	50 120	38 120	37 130	38 120				24 110	24 110	24 110	23 100	23 100	24 110
7		23 140	23 130	27 90	40 110	23 110	26 100	26 90			38 110	50 110	38 110	50 110	38 110			22 140	23 100	23 100	23 100	23 100	23 100	24 110
8							24 100	27 110	27 110		38 110	37 120	38 110	37 120	38 110			22 140	23 100	23 100	23 100	23 100	23 100	24 110
9							23 90	27 110	27 110		38 110	37 120	38 110	37 120	38 110			22 140	23 100	23 100	23 100	23 100	23 100	24 110
10	41 100		24 110			29 100	29 110	23 100	51 100	40 100	38 120	38 110	38 110	37 120	38 110			22 140	23 100	23 100	23 100	23 100	23 100	24 110
11	23 110	29 110	28 100	29 100	23 110	23 110	23 110	55 110	53 110	49 110	53 110	61 110	68 100	55 100	60 100	52 100	42 100	24 100	24 100	24 100	24 100	24 100	24 100	24 110
12	23 100		23 100			29 100	38 100	32 100	38 110	50 130	50 100	52 100	38 100											
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
15	29 100	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
16	23 110	23 100	22 100	22 110	27 100	28 110	27 100	27 100	29 120		39 110	38 110				32 120	53 110	37 110	30 110	30 110	30 110	30 110	30 110	30 110
17	22 100	22 100	22 100	22 110	27 100	28 110	27 100	27 100	29 120		39 110	38 110				32 120	53 110	37 110	30 110	30 110	30 110	30 110	30 110	30 110
18	35 100	36 100	35 100	43 100	37 100	36 110	53 100	53 100	74 100	C	C	C	C	C	C	31 100	53 110	41 110	35 100	31 100	31 100	31 100	31 100	31 100
19	24 100	31 100	27 100	27 100	33 100	33 100	33 100	53 110	41 110	53 110	51 100	56 100	74 100	68 100	51 100	51 100	46 100	35 100	30 100	30 100	30 100	30 100	30 100	30 100
20																								
21	(32) 100	(28) 100	(29) 100	(37) 100	(32) 110	(23) 110	(48) 100	42 110	64 100	41 110	33 110					50 130	32 110	27 100	27 100	27 100	27 100	27 100	27 100	27 100
22	(29) 100	29 100	(29) 100	(29) 100	27 110	27 100	27 100	27 100	27 110		(44) 100					30 130	30 130	28 120	27 100	27 100	27 100	27 100	27 100	27 100
23	(27) 100	34 100	(28) 100	23 100	(22) 100											36 120	35 110	25 110	25 110	25 110	25 110	25 110	25 110	25 110
24	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	39 120	39 120	38 120	38 120	38 120	38 120	38 120	38 120	38 120
25	36 110	32 110	33 110	30 100	23 100		27 100	(27) 90	31 100	C	C	C	C	C	C	39 120	39 120	38 120	38 120	38 120	38 120	38 120	38 120	38 120
26							29 100	29 120	28 110	C	C	C	C	C	C	36 120	36 120	36 120	36 120	36 120	36 120	36 120	36 120	36 120
27	33 100	C	C	C	C	C				C	C	C	C	C	C	36 120	36 120	36 120	36 120	36 120	36 120	36 120	36 120	36 120
28	31 100	C	C	C	C	C				C	C	C	C	C	C	36 120	36 120	36 120	36 120	36 120	36 120	36 120	36 120	36 120
29	28 100	29 110	29 100	27 100	24 100	29 100	29 100	22 100	C	C	C	C	C	C	C	36 120	36 120	36 120	36 120	36 120	36 120	36 120	36 120	36 120
30																36 110	36 110	36 110	36 110	36 110	36 110	36 110	36 110	36 110
31	24 120	C	23 120													36 110	36 110	36 110	36 110	36 110	36 110	36 110	36 110	36 110
Median	23	19	22	22	23	23	27	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
Count	28	22	24	26	27	26	26	26	24	23	29	29	38	37	37	36	37	28	24	24	23	22	21	22

Sweep 0.75 Mc in 3.4 min

Manual ☐ Automatic ☒\* Median  $fE_s$  less than median  $f_oF_2$ .



# TABLE 72 Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

National Bureau of Standards  
(Institution)

Scaled by: A. K. B.

Calculated by: A. M. K.

J. L. S.

B. W. D.

## IONOSPHERIC DATA

F2-M1500  
(Characteristic)

October 1946  
(Month)

Washington, D. C.

Observed at

Lat 39.0° N, Long 77.5° W

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
2	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
3	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
4	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
5	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
9	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
10	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
11	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
12	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
13	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
14	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
15	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
16	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
17	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
18	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
19	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
20	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
21	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
22	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
23	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
24	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
25	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
26	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
27	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
28	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
29	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
30	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
31	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Median	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Count	26	25	26	25	24	24	27	25	22	18	20	15	19	14	14	13	10	8	3	15	22	24	21	23

Sweep 0.75 Mc to 1.5 Mc in 3.4 min

Manual ☐ Automatic ☒

TABLE 73  
Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.  
IONOSPHERIC DATA

F2-M3000

(Unit)

October 1946

(Month)

Observed at Washington, D. C.

National Bureau of Standards

(Institution)

Scaled by A. K. B.

J. L. S.

Calculated by A. M. K.

B. W. D.

Day		39.0° N										77.5° W										75° W										Mean Time										A.M.K.				B.W.D.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
1	2.7	C	(2.6)	2.6	A	2.6 <sup>F</sup>	(3.0)	C	C	3.0	C	2.8	C	2.9	(2.8)	2.9	(3.0) <sup>2</sup>	2.8	C	C	C	(2.8)	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
2	2.6	2.7	2.8	3.0	2.8 <sup>F</sup>	C	3.0	3.2	3.2	3.0	2.9	2.9	2.9	(2.9)	(2.8)	2.9	(3.0) <sup>2</sup>	3.0	(3.0)	C	C	C	(2.7)	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.

Sweep 0.75 Mc to 11.5 Mc in 3.4 min

Manual ☐ Automatic ☒

TABLE 74  
Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.  
IONOSPHERIC DATA

FI-M3000 (Characteristic) (Unit) October 1946 (Month)  
Observed at Washington, D. C.  
Lat 39.0° N, Long 77.5° W

National Bureau of Standards  
(Institution)  
Scaled by: A. K. B. J. L. S.  
Calculated by: A. M. K. B. W. D.

75° W																								Mean Time											B. W. D.										
Lot 39.0° N, Long 77.5° W																																			Calculated by: A.M.K.										
Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23																					
1										C	L	C	3.5	C	(3.6)	L	L																												
2										L	(3.7)	L	(3.8)	(3.7)	(3.7)	L	L																												
3									L	L <sup>H</sup>	L	(3.6) <sup>H</sup>	L <sup>H</sup>	3.7	L	L	L																												
4									C	L	L	L <sup>H</sup>	(3.7) <sup>H</sup>	L <sup>H</sup>	L	L	L																												
5									L	L	L	L	(3.7)	(3.7)	L	L	L																												
6									L	L <sup>H</sup>	L	L	(3.7)	L	L	L	L																												
7									C	C	C	C	C	C	C	C	L																												
8									L	L	L	L	L <sup>H</sup>	L	L	L	L																												
9										L	L	L	L <sup>H</sup>	(3.8)	L <sup>H</sup>	L	L																												
10										L	L <sup>H</sup>	3.8	L	3.7	L	L	L																												
11										C	L	L	(3.8)	A	A	C	A																												
12									L	L	L	L	L	C	C	C	C																												
13									C	C	C	C	C	C	C	C	C																												
14									C	C	C	C	C	C	C	C	C																												
15									C	C	C	C	C	C	C	C	L																												
16									C	C	L	L	L	L	L	L	L																												
17										L	L	C	L	L	L	L	L																												
18										C	C	C	C	C	C	C	C																												
19										L	L	L	L	A	L	L	L																												
20										L	L	L	L	L	L	L	L																												
21										L	*	L	C	C	C	C	C																												
22									C	C	C	C	C	C	C	C	C																												
23													L	C	C	C	C																												
24											L	L	L	L	L	L	L																												
25										C	C	C	C	C	C	C	C																												
26											L	L	L	L	L	L	L																												
27										C	C	C	C	C	C	C	C																												
28										L	L	L	L	L	L	L	L																												
29										L	L <sup>H</sup>	L <sup>H</sup>	L <sup>H</sup>	L	L	L	L																												
30									L	L	(3.9)	L	L <sup>H</sup>	L	C	C	C																												
31										L	L	L	L	L	L	L	L																												
Median									L	L	L	L	(3.7)	(3.7)	L	L	L																												
Count									3	2	2	2	5	6	2	2	2																												

Sweep 0.75 Mc to 11.5 Mc in 3.4 min  
Manual ☐ Automatic ☒

\* No evidence of F1 layer appearing on record.





Table 76

Ionospheric Storminess, October 1946

Day October	Ionosphere 00-12 GCT	Character* 12-24 GCT	Principal Storms		Geomagnetic Character**	
			Beginning GCT	End GCT	00-12 GCT	12-24 GCT
1	2	1			3	3
2	2	2			2	2
3	2	2			2	2
4	1	2			2	2
5	1	2			2	3
6	1	1			3	3
7	0	***			3	2
8	1	1			1	2
9	2	2			4	3
10	1	1			2	2
11	1	1			2	2
12	2	***			2	1
13	***	***			1	1
14	***	***			1	1
15	***	***			1	2
16	1	2			2	2
17	0	2			1	1
18	1	***			1	1
19	0	2			0	2
20	1	2			3	3
21	1	2			1	2
22	1	2			2	1
23	1	2			2	1
24	***	1			1	2
25	1	***			2	1
26	1	2			3	3
27	4	3	0100	1100	5	4
28	2	0			2	1
29	1	1			2	1
30	1	2			1	1
31	1	2			2	3

\*Ionosphere Character figure (I-figure) for ionospheric storminess at Washington, D.C., during 12-hour period, on an arbitrary scale of 0 to 9, 9 representing the greatest disturbance.

\*\*Average for 12 hours of American magnetic K-figure, determined by a number of observatories, on an arbitrary scale of 0 to 9, 9 representing the greatest disturbance.

\*\*\*No readable record. Refer to Table 65 for detailed explanation.

Table 77  
Sudden Ionosphere Disturbances Observed at Washington, D. C.

Day	GCT		Location of Transmitters	Relative Intensity at minimum*	Other Phenomena
October 5	1421	1620	Ohio, D.C., Chile, England, Mexico, Ontario	0.02	Terr.mag. pulse** 1420-1535
13	1532	1750	Ohio, D.C., Mexico, New York, Ontario	0.05	
17	1550	1640	Ohio, D.C., Chile, England, Mexico, Ontario	0.05	
26	1749	1820	Ohio, D.C., Chile, England, Mexico, New York, Ontario	0.03	Terr.mag. pulse** 1750-1805
31	1600	1620	Ohio, D.C., Mexico, Ontario	0.1	

\*Ratio of received field intensity during SID to average field intensity before and after, for station WEXAL, 6080 kilocycles, 600 kilometers distant.

\*\*As observed on Cheltenham magnetogram of the United States Coast and Geodetic Survey.



Table 78

Sudden Ionosphere Disturbances Reported by Engineer-in-ChiefCable and Wireless, Ltd.

Day	GCT		Receiving Station	Location of Transmitters
	Beginning	End		
September 13	1320	1405	Brentwood, England	Austria, Brazil, Bulgaria, Canary Islands, Chile, Colombia, India, Madagascar, Palestine, Spain, Thailand, Uruguay, Venezuela
13	1320	1405	Somerton, England	Argentina, Australia, Barbados, Canada, Egypt
13	1833	1845	Somerton, England	Argentina, Barbados, Canada, New York
21	1108	1330	Brentwood, England	Austria, Belgian Congo, Brazil, Bulgaria, Canary Islands, Chile, Colombia, Greece, India, Iran, Kenya, Madagascar, Palestine, Portugal, Southern Rhodesia, Spain, Switzerland, Syria, Turkey, Uruguay, U.S.S.R., Venezuela, Yugoslavia, Zanzibar
21	1108	1330	Somerton, England	Argentina, Australia, Barbados, Canada, Ceylon, China, Egypt, Gold Coast, India, Japan, New York, Union of South Africa
October 5	1435	1525	Somerton, England	Canada, Japan, New York

Note - Observers are invited to send to the CRPL information on times of beginning and end of sudden ionosphere disturbances, for publication as above. Address letters to Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Table 79

## Provisional Radio Propagation Quality Figures

September 1946

Compared with CRPL Warnings and CRPL Probable Disturbed Period Forecasts

Day	North Atlantic					North Pacific				
	Quality Figure	CRPL* Warning	CRPL Probable Disturbed Period Forecast	Geo-magnetic $K_A$		Quality Figure	CRPL* Warning	CRPL Probable Disturbed Period Forecast	Geo-magnetic $K_A$	
	GCT 01-12 13-24	GCT 01-12 13-24	GCT 01-12 13-24	GCT 01-12 13-24		GCT 01-12 13-24	GCT 01-12 13-24	GCT 01-12 13-24	GCT 01-12 13-24	
1	6 6	X		1 1		7 7	X		1 1	
2	6 6			2 1		6 5			2 1	
3	6 6			1 2		6 6			1 2	
4	5 6			3 2		5 8			3 2	
5	5 5			2 2		6 7			2 2	
6	6 6			2 0		6 8			2 0	
7	6 5			2 3		7 6			2 3	
8	6 6			2 2		5 7			2 2	
9	6 6			2 3		5 8			2 3	
10	5 6	X	X	3 2		5 (2)	X	X	3 2	
11	5 6		X	2 2		(4) 5		X	2 2	
12	6 6		X	2 2		6 6		X	2 2	
13	6 5		X	2 2		6 7		X	2 2	
14	6 6			2 2		5 7			2 2	
15	6 7	X		1 2		6 6	X		1 2	
16	6 6			1 4		(3) -			1 4	
17	(4) (4)	X X	X	3 3		5 (4)	X X	X	3 3	
18	(2) (3)	X X	X	6 6		(2) (4)	X X	X	6 6	
19	(2) (3)	X X	X	4 4		(3) (2)	X X	X	4 4	
20	(4) 5	X X	X	2 1		(4) 7	X X	X	2 1	
21	(4) (4)	X X	X	1 4		(4) (3)	X X	X	1 4	
22	(2) (2)	X		6 7		(1) (3)	X		6 7	
23	(2) (2)	X X		6 6		(2) (4)	X X		6 6	
24	(3) (3)	X X		3 2		(3) 6	X X		3 2	
25	(4) (4)	X X		1 1		(4) 7	X X		1 1	
26	5 5			1 2		7 7			1 2	
27	5 (4)	X	X	3 4		5 (4)	X	X	3 4	
28	(4) (4)	X X	X	5 5		(4) 7	X X	X	5 5	
29	(4) (4)	X X	X	3 3		6 (4)	X X	X	3 3	
30	(3) (4)	X X		4 3		7 7	X X		4 3	

## Score:

H	13	8	12	10
M	0	5	3	5
G	14	13	12	13
(S)	1	3	0	0
S	2	1	3	2

\*Broadcast on WWV, Washington, D.C. Times of warnings recorded to nearest half-day as broadcast.

## Quality Figure Scale:

- 1 = Useless
- 2 = Very poor
- 3 = Poor
- 4 = Poor to fair
- 5 = Fair
- 6 = Fair to good
- 7 = Good
- 8 = Very good
- 9 = Excellent

## Symbols

- X Warning given or probable disturbed date.
- H Quality 4 or worse on day or half-day of warning.
- M Quality 4 or worse on day or half-day of no warning.
- G Quality 5 or better on day of no warning.
- (S) Quality 5 on day of warning.
- S Quality 6 or better on day of warning.
- ( ) Quality 4 or worse, (disturbed).

Geomagnetic  $K_A$  on the standard scale of 0 to 9, 9 representing the greatest disturbance.

Table 80Daily Median Values of American Relative Sunspot Numbers\*October 1946

Date	No.	Date	No.
1	89	16	128
2	99	17	151
3	64	18	122
4	70	19	128
5	64	20	144
6	66	21	150
7	63	22	152
8	56	23	158
9	66	24	156
10	45	25	141
11	37	26	126
12	82	27	122
13	106	28	102
14	106	29	106
15	99	30	112
		31	104
No. Days	31	Mean	103.7

\* Median of data from 12 observers.

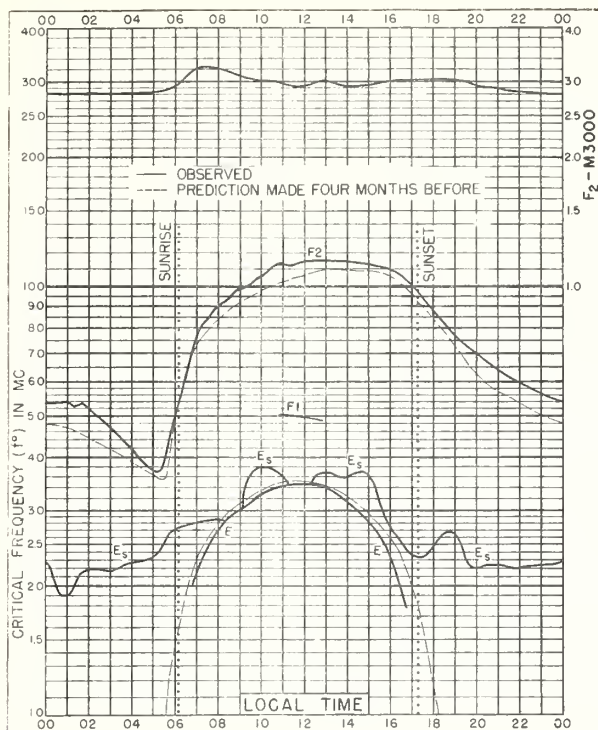


Fig 1 WASHINGTON, D.C  
39.0°N, 77.5°W

OCTOBER 1946

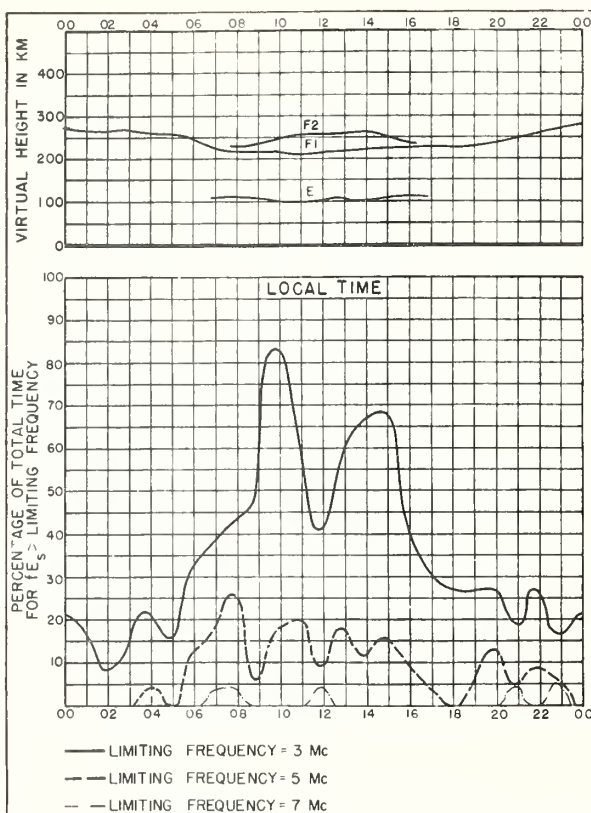


Fig. 2. WASHINGTON, D.C

OCTOBER 1946

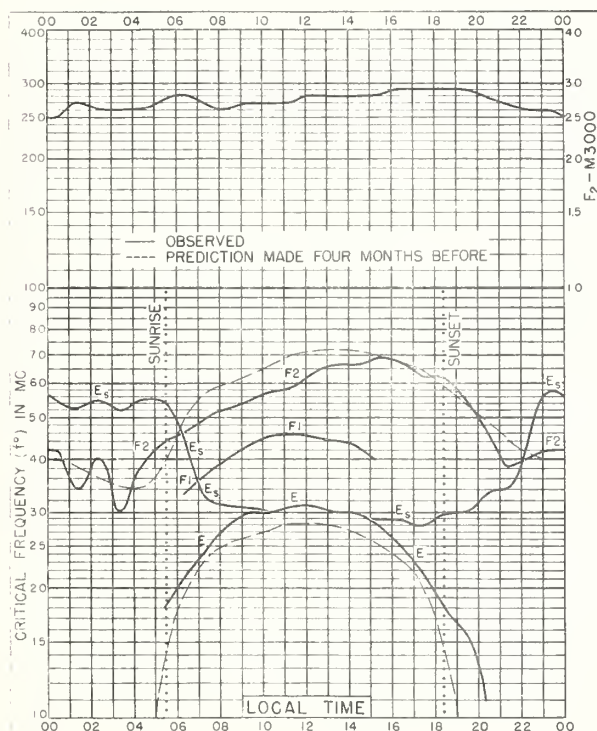


Fig 3. FAIRBANKS, ALASKA  
64.9°N, 147.8°W

SEPTEMBER 1946

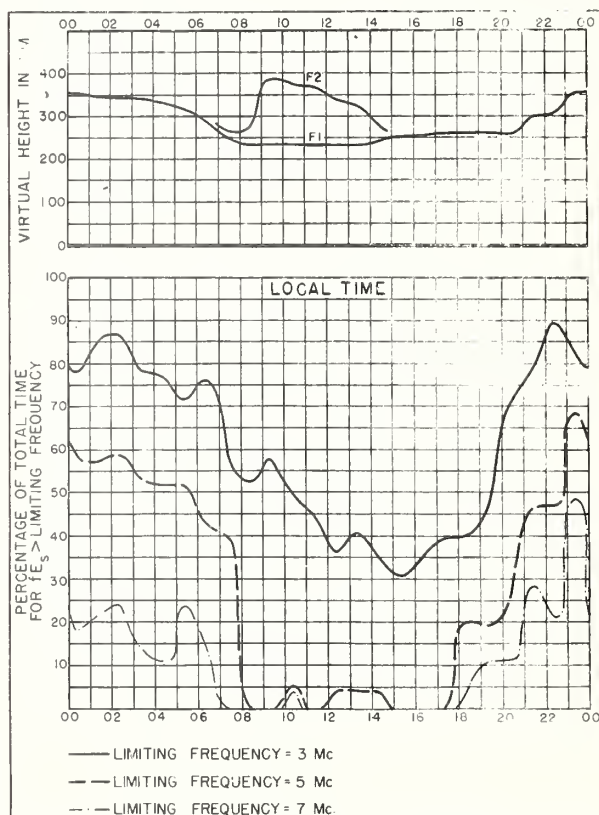


Fig. 4. FAIRBANKS, ALASKA

SEPTEMBER 1946



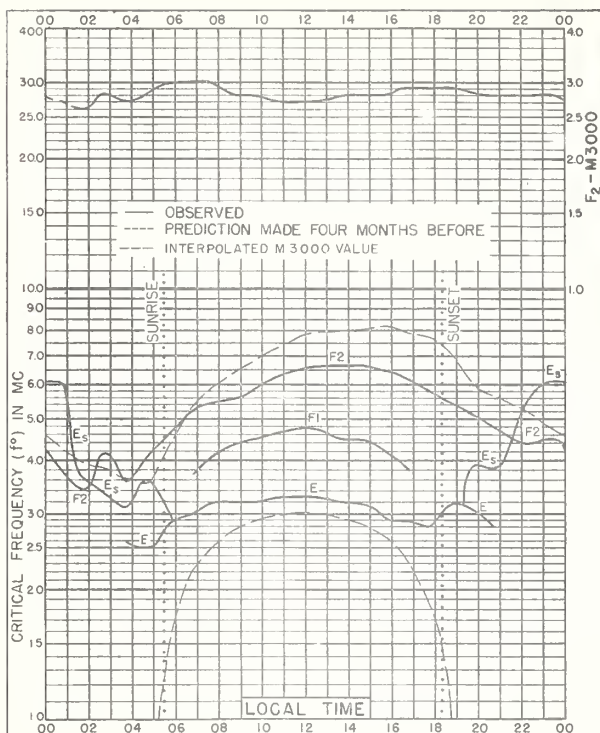


Fig. 5. CHURCHILL, CANADA  
58.8°N, 94.2°W  
SEPTEMBER 1946

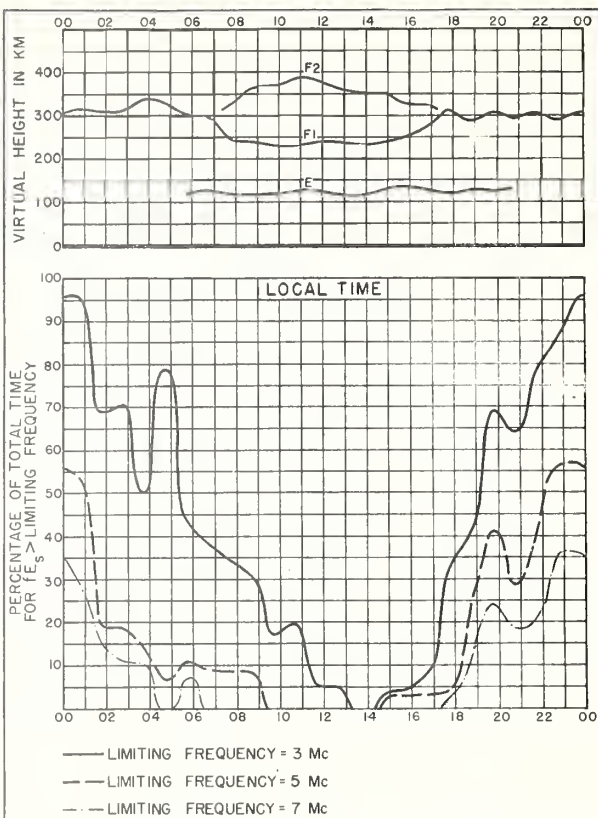


Fig. 6. CHURCHILL, CANADA  
SEPTEMBER 1946

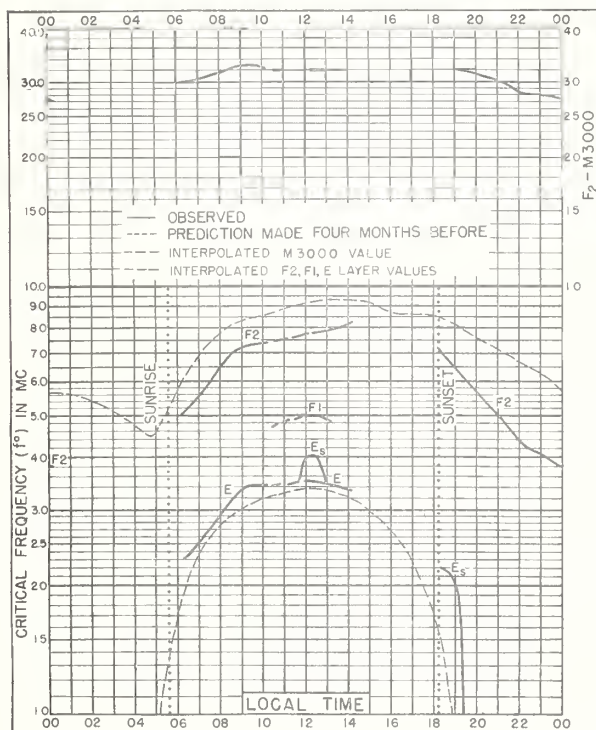


Fig. 7. ADAK, ALASKA  
51.9°N, 176.6°W  
SEPTEMBER 1946

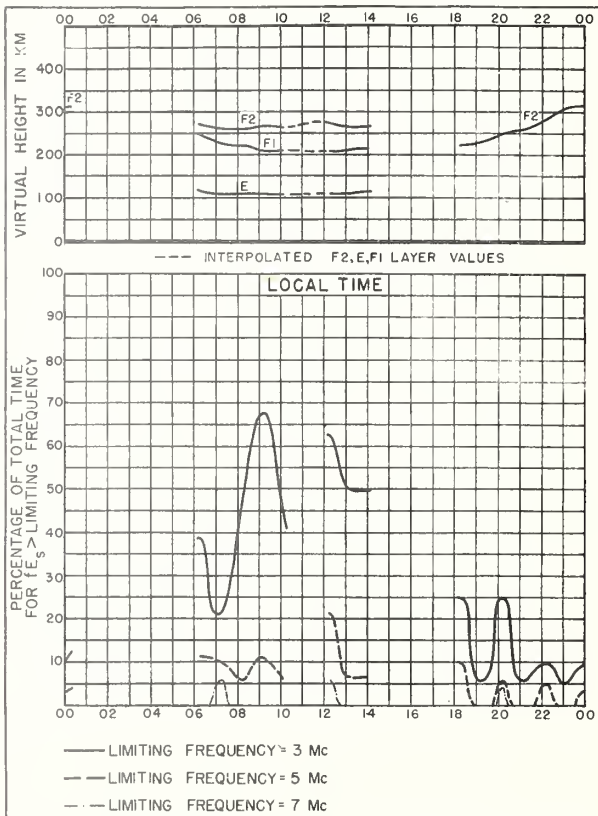


Fig. 8. ADAK, ALASKA  
SEPTEMBER 1946

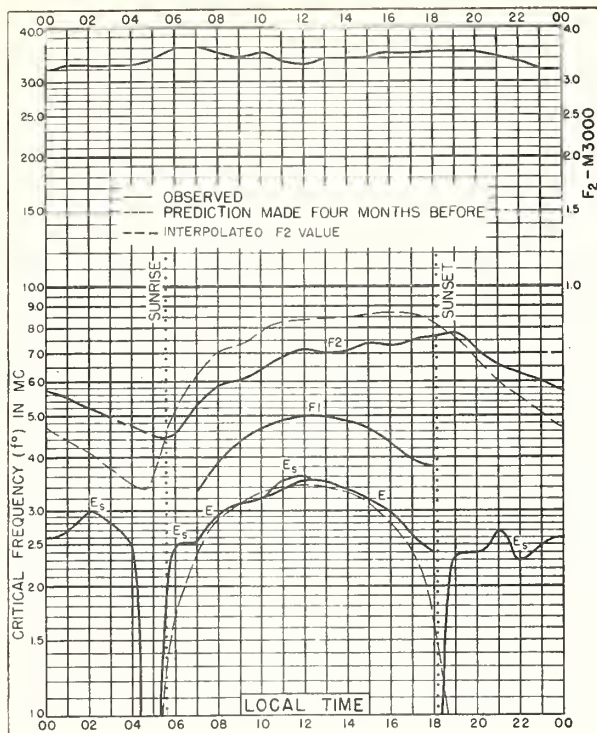


Fig. 9. ST. JOHN'S, NEWFOUNDLAND  
47.6°N, 52.7°W SEPTEMBER 1946

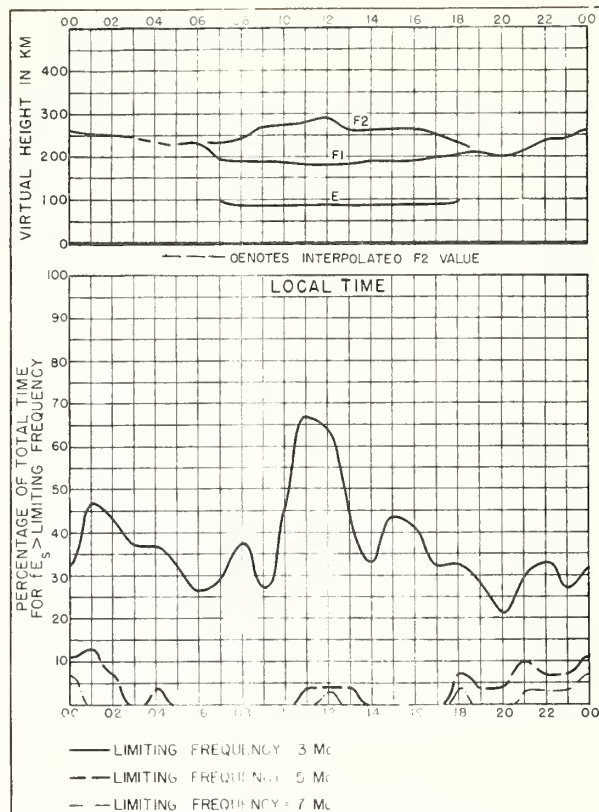


Fig. 10. ST. JOHN'S, NEWFOUNDLAND SEPTEMBER 1946

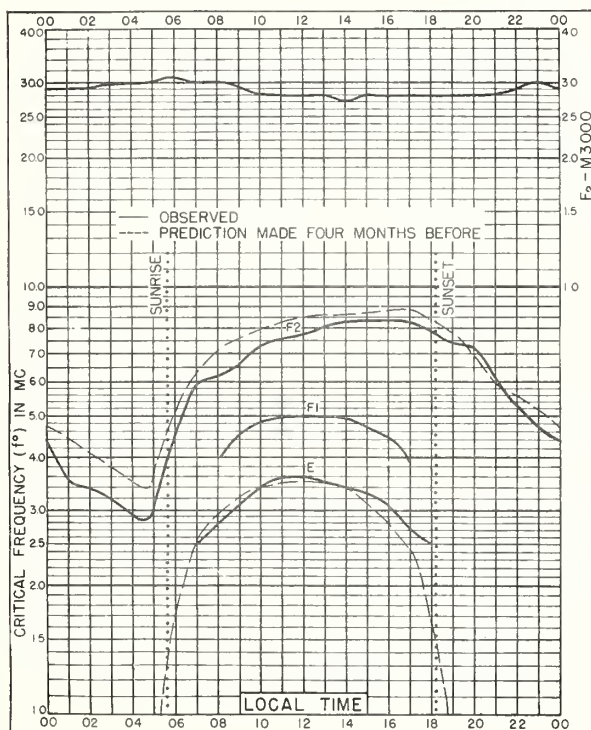


Fig. 11. OTTAWA, CANADA  
45.5°N, 75.8°W SEPTEMBER 1946

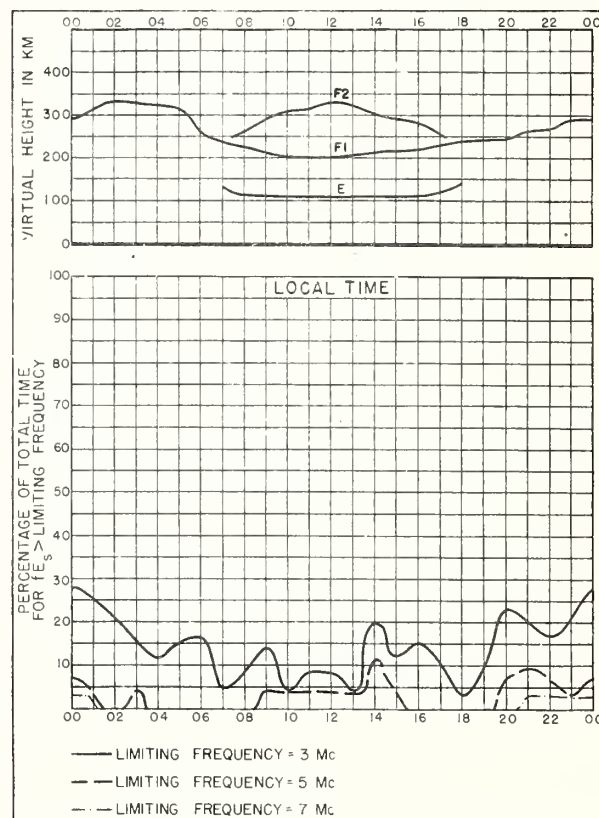


Fig. 12. OTTAWA, CANADA SEPTEMBER 1946



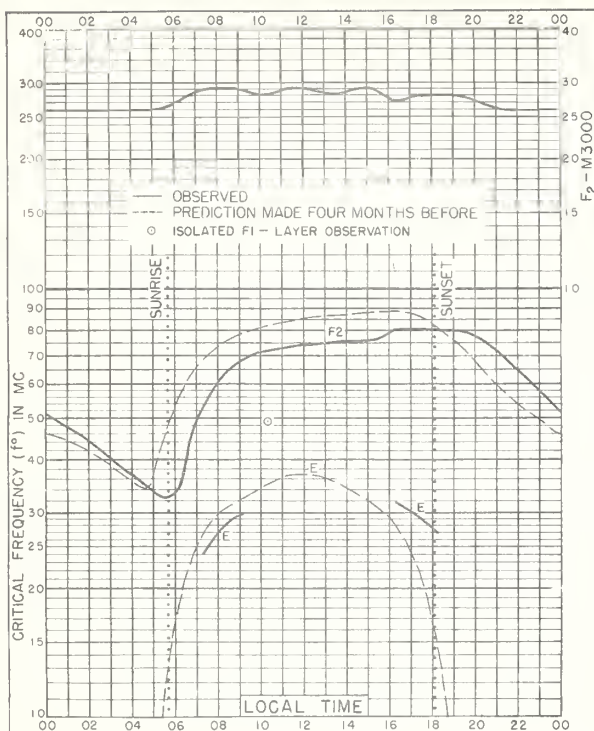


Fig. 13. BOSTON, MASSACHUSETTS  
42. 4°N, 71 2°W SEPTEMBER 1946

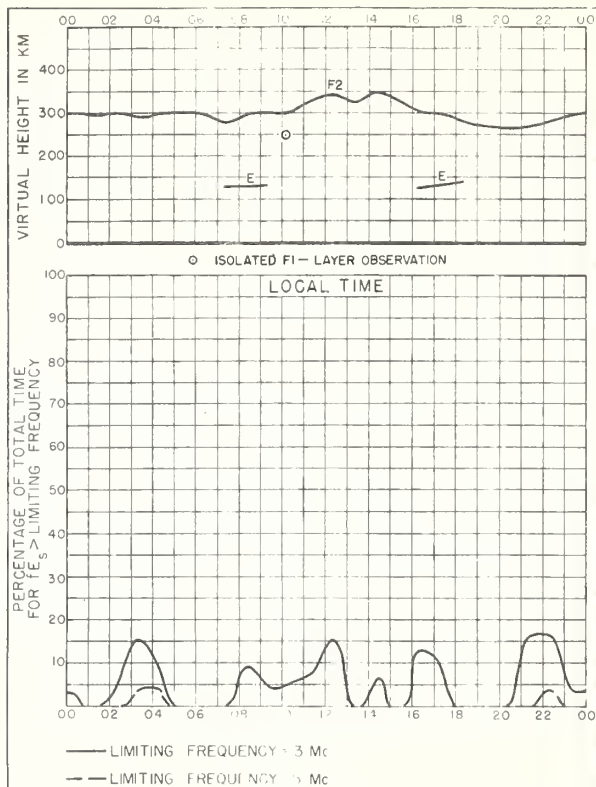


Fig. 14 BOSTON, MASSACHUSETTS SEPTEMBER 1946

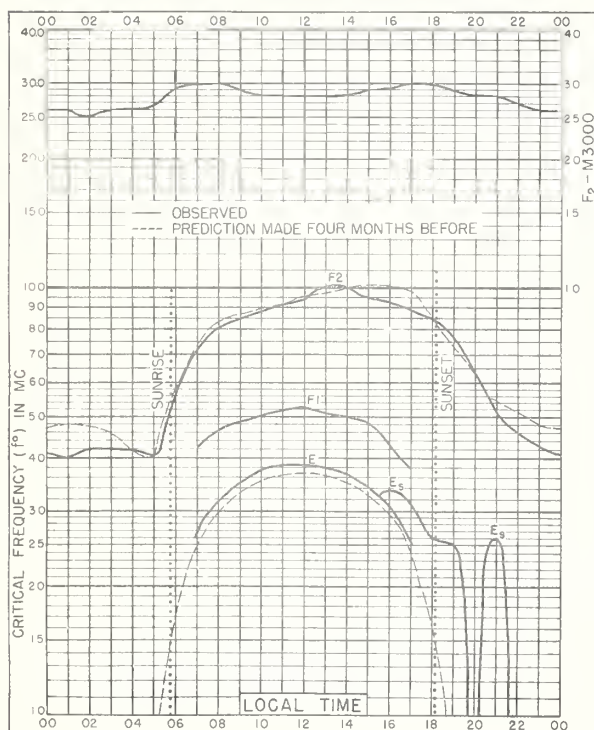


Fig. 15. SAN FRANCISCO, CALIFORNIA  
37 4°N, 122 2°W SEPTEMBER 1946

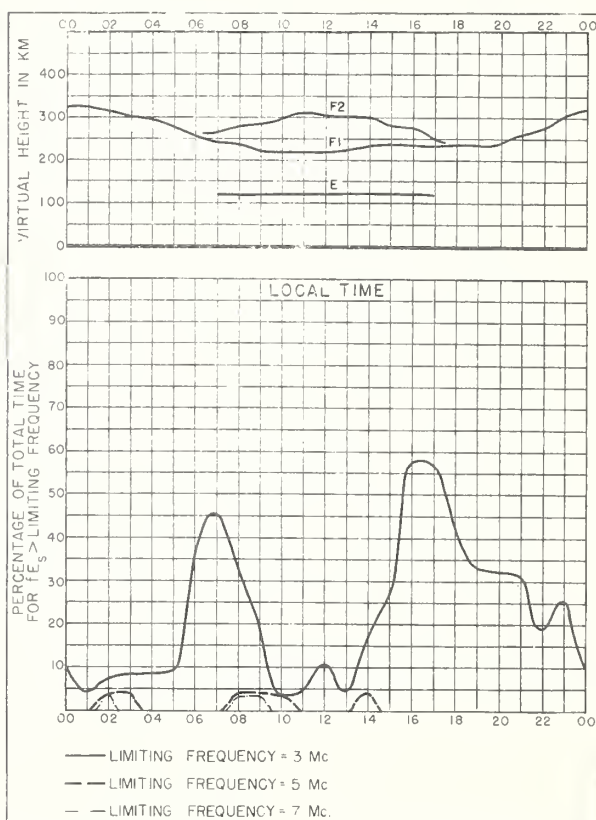


Fig. 16. SAN FRANCISCO, CALIFORNIA SEPTEMBER 1946

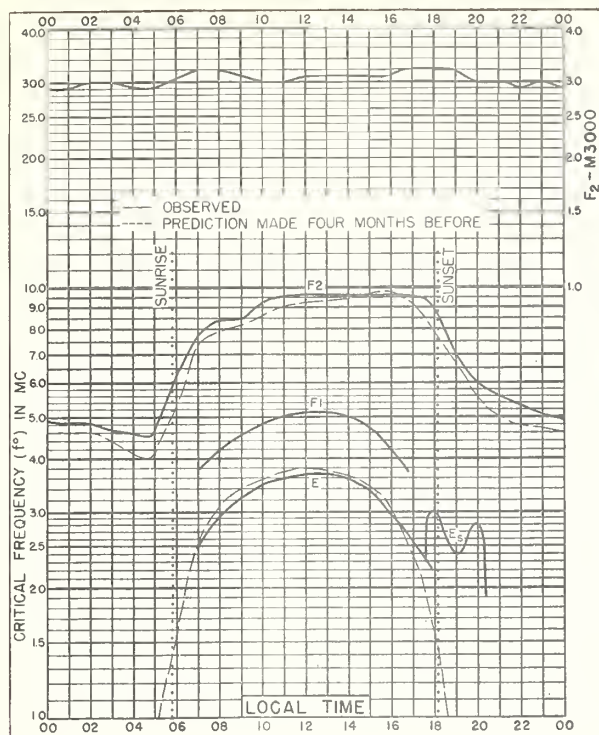


Fig. 17 BATON ROUGE, LOUISIANA  
30.5°N, 91.2°W SEPTEMBER 1946

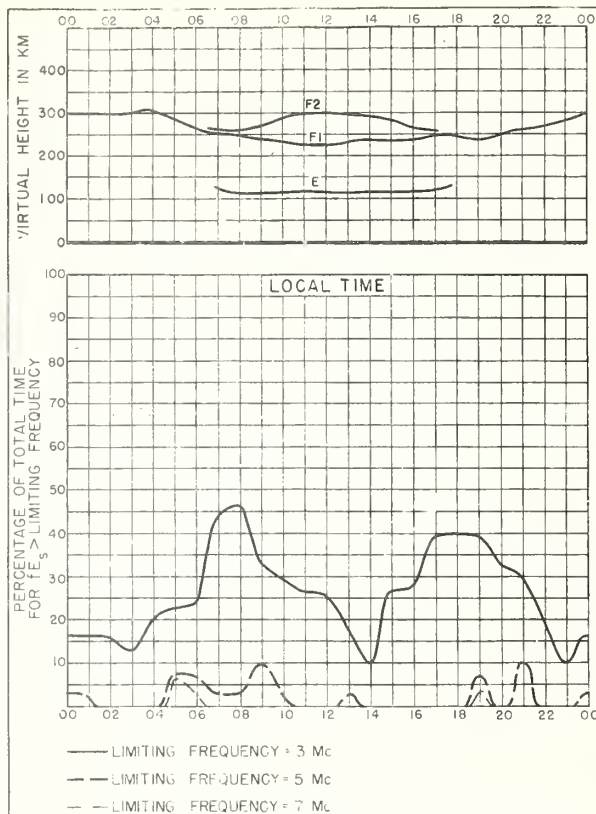


Fig. 18 BATON ROUGE, LOUISIANA SEPTEMBER 1946

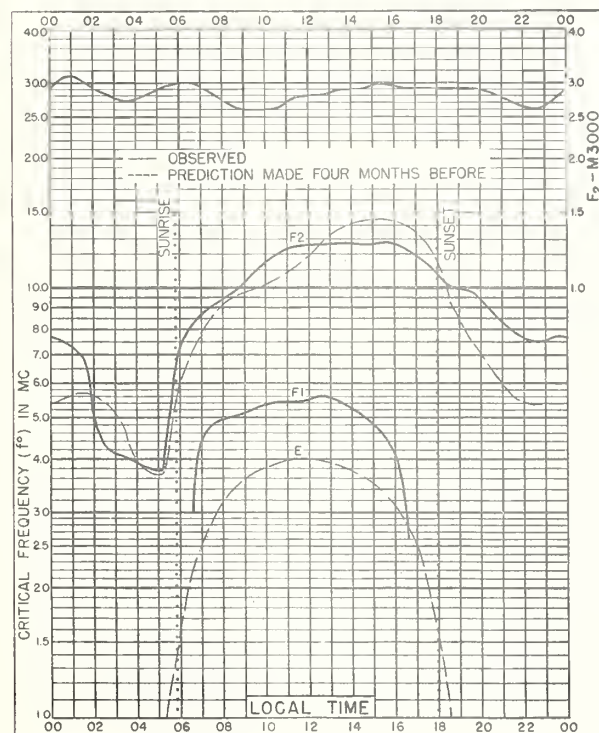


Fig. 19 MAUI, HAWAII  
20.8°N, 156.5°W SEPTEMBER 1946

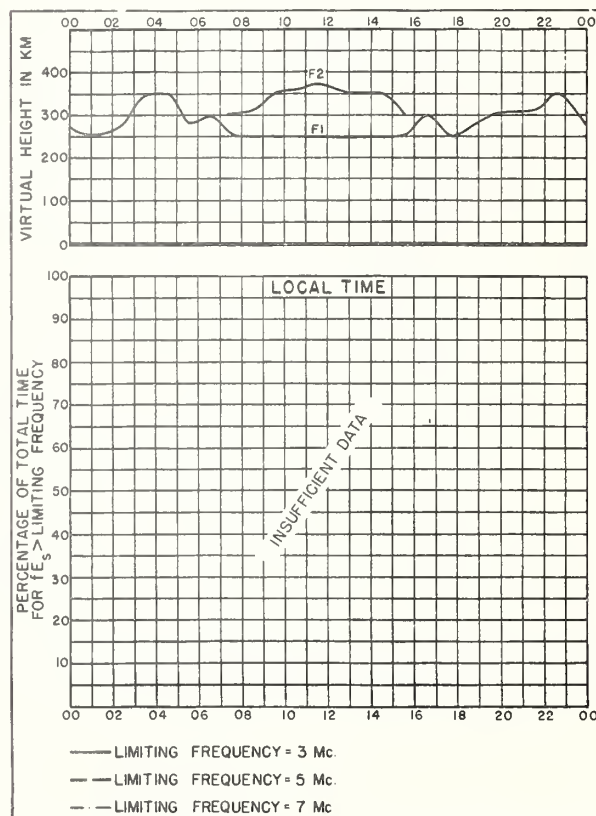
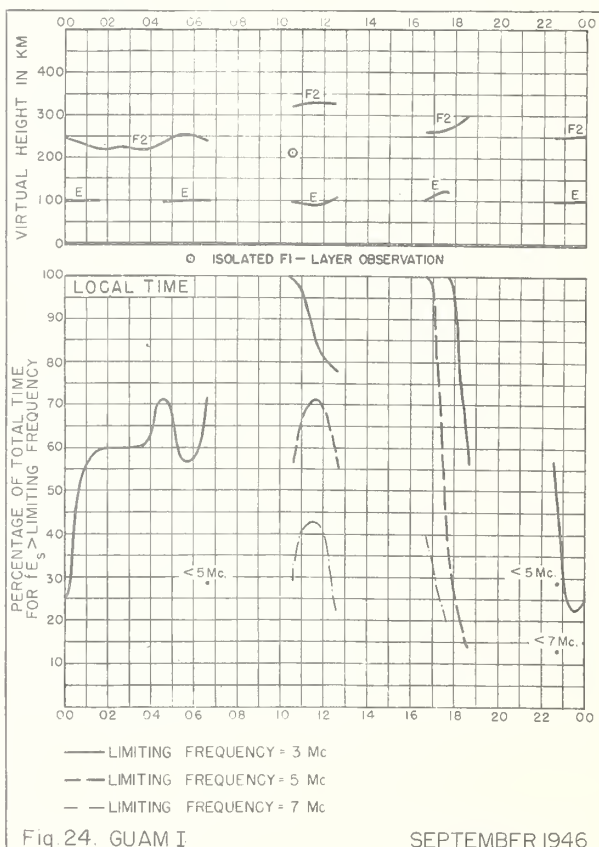
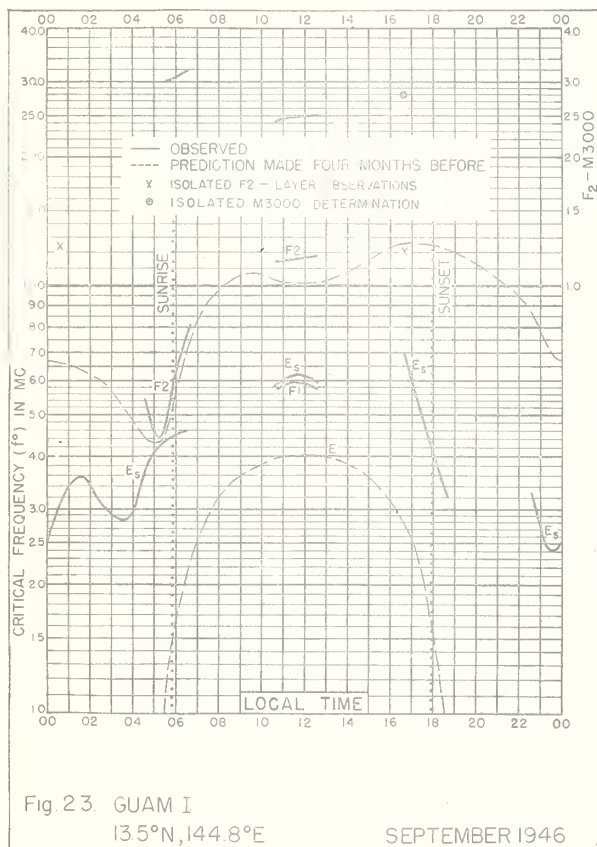
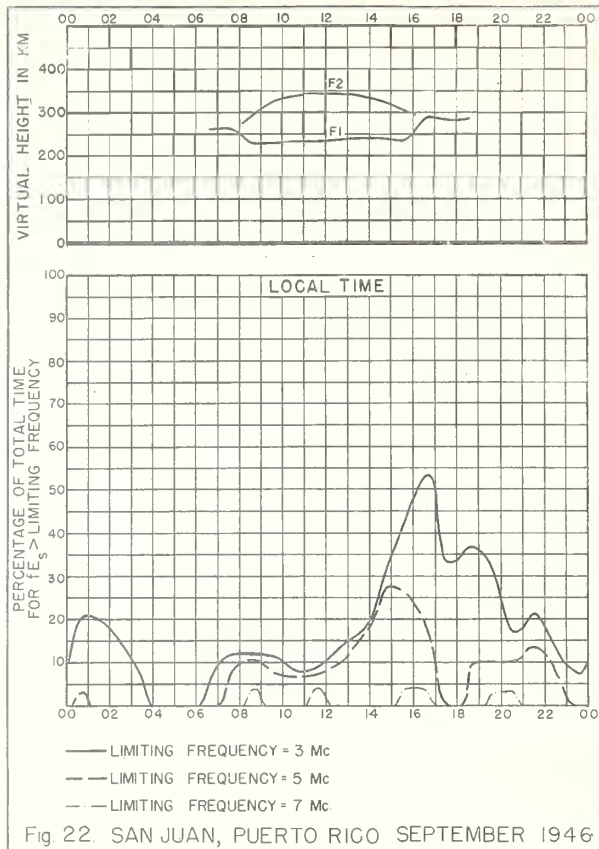
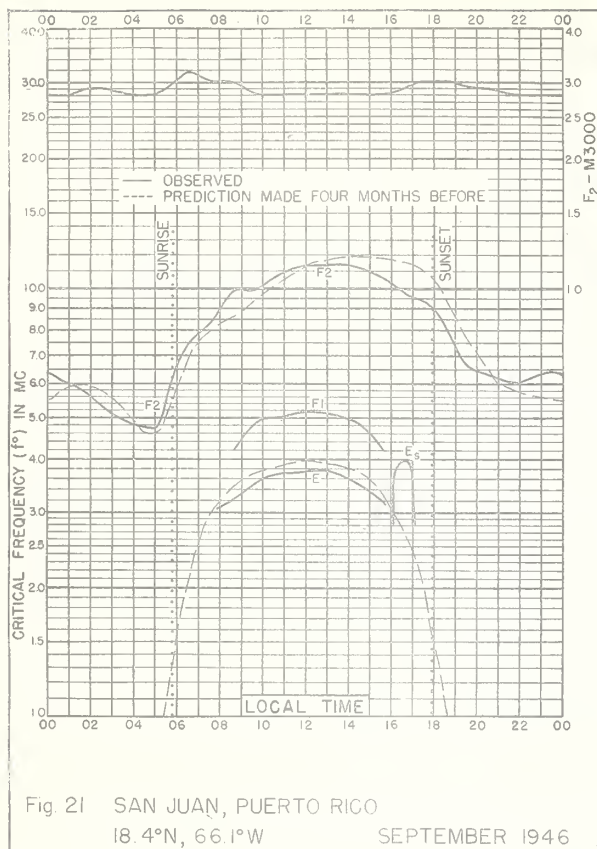
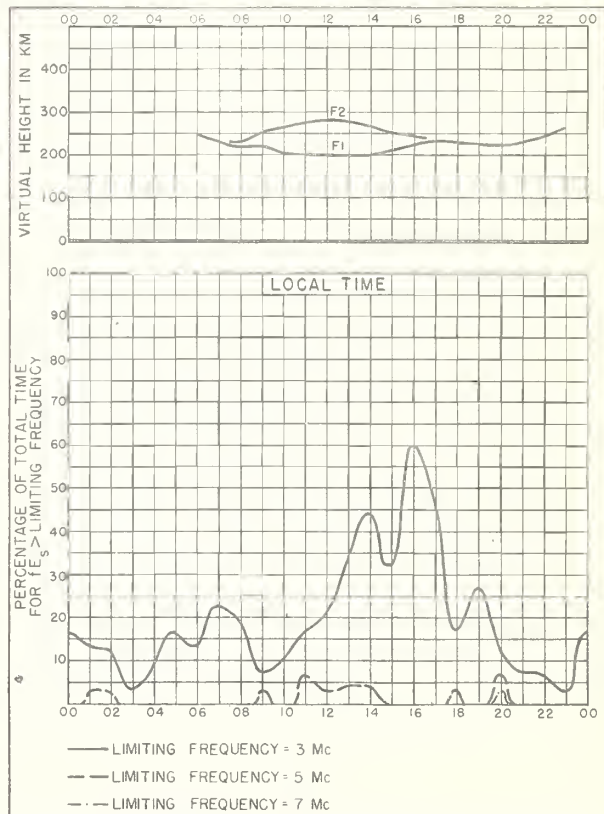
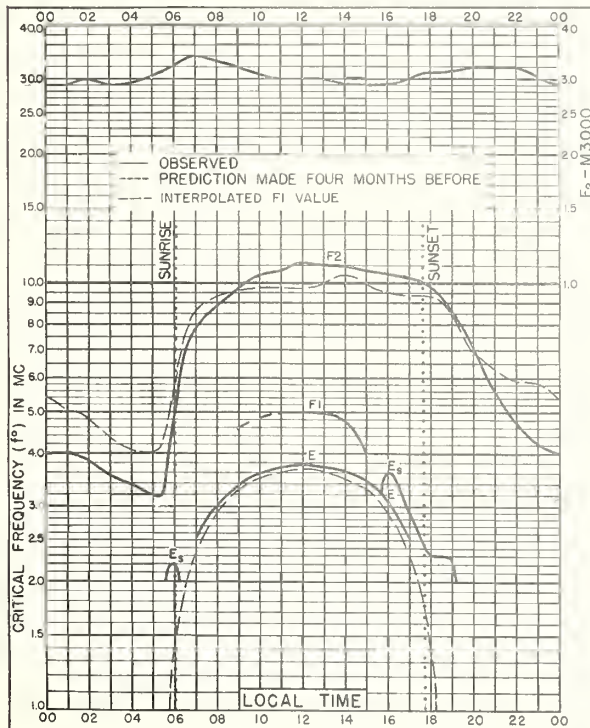
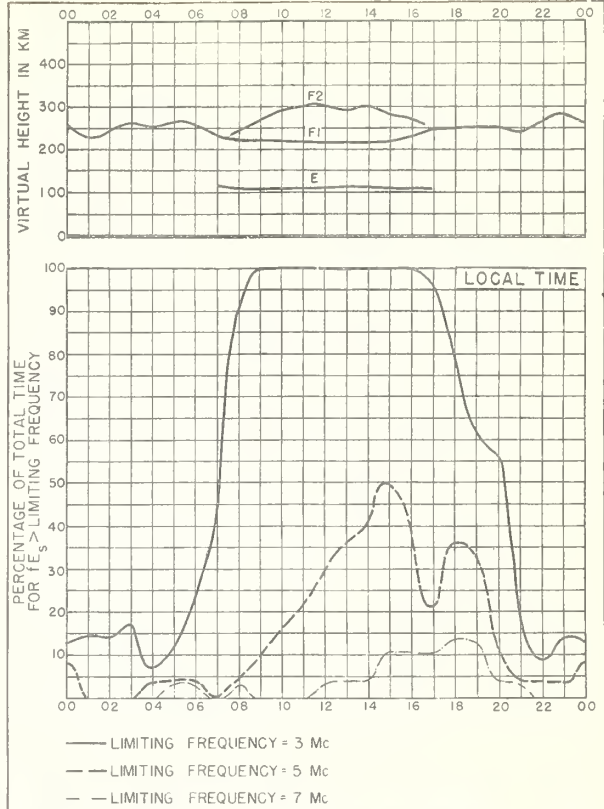
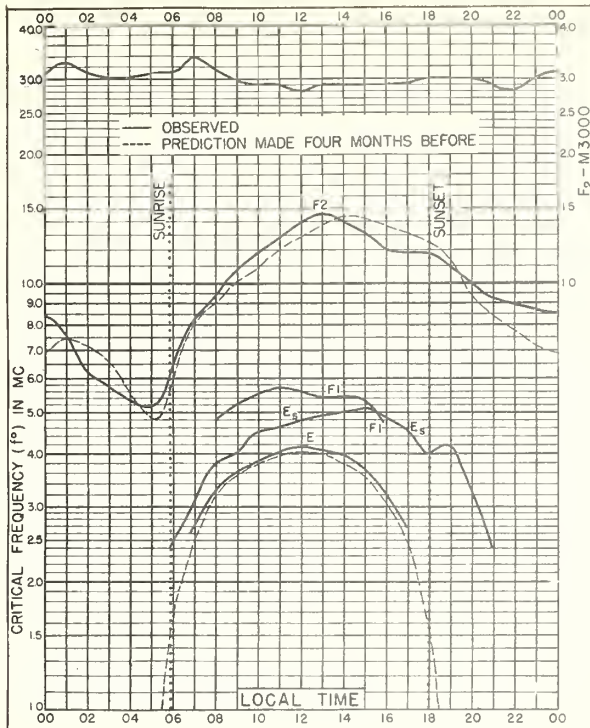
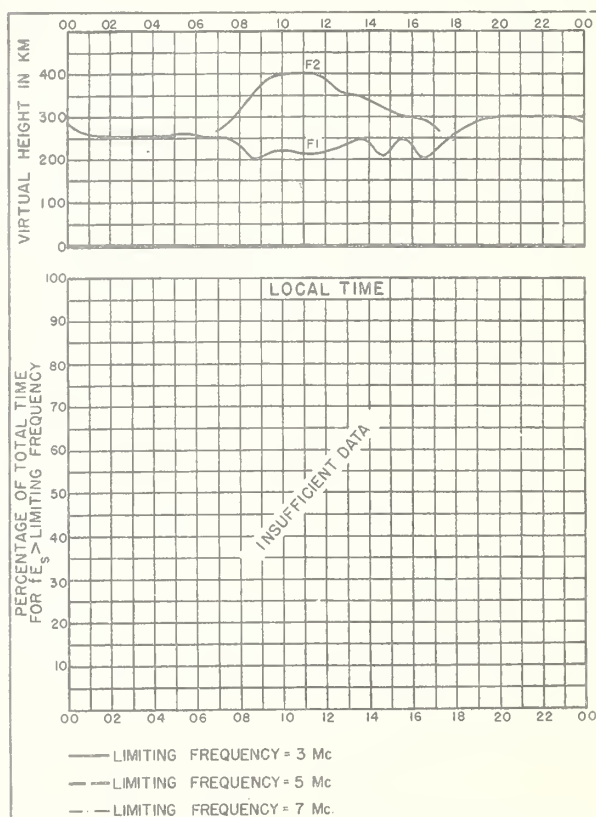
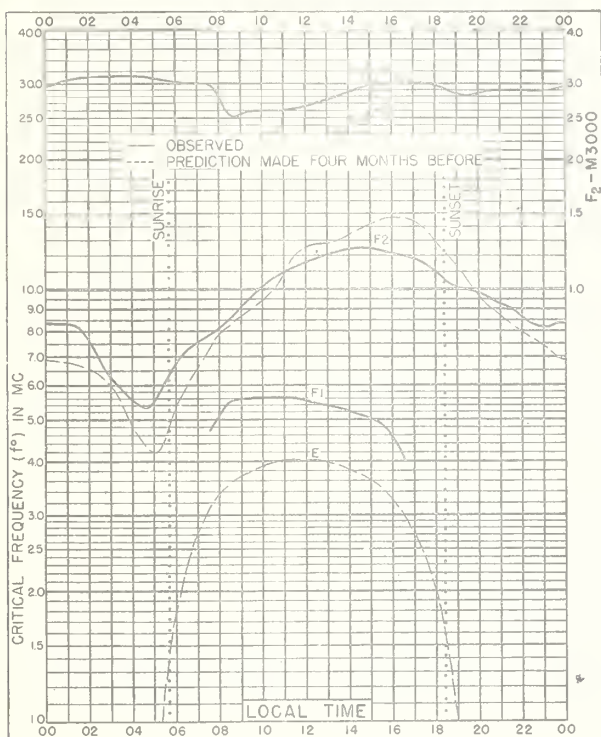
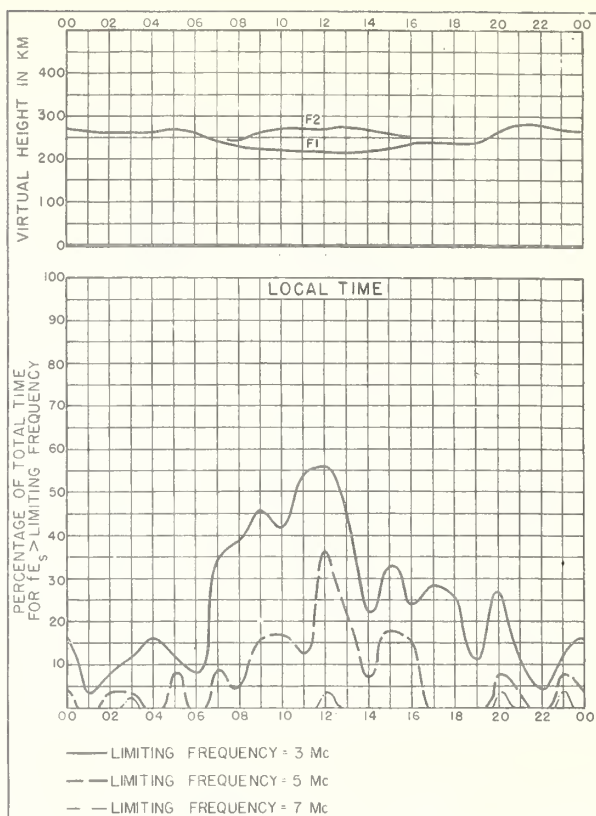
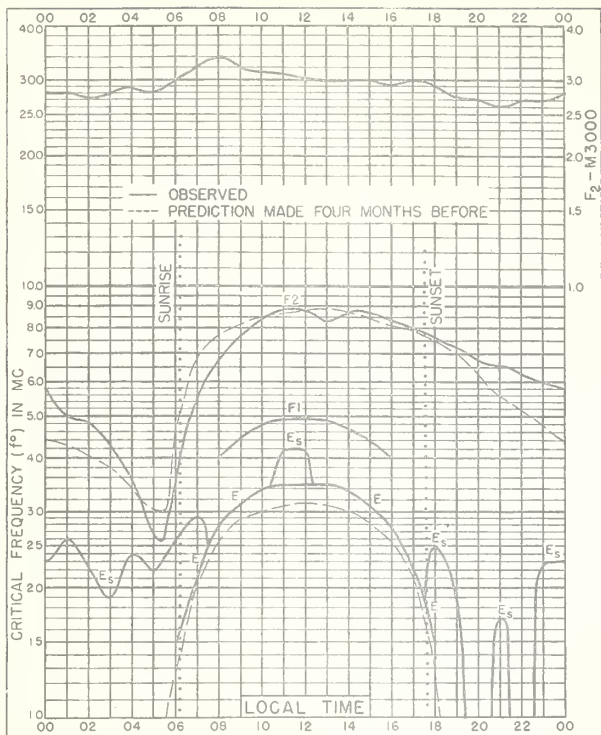


Fig. 20 MAUI, HAWAII SEPTEMBER 1946











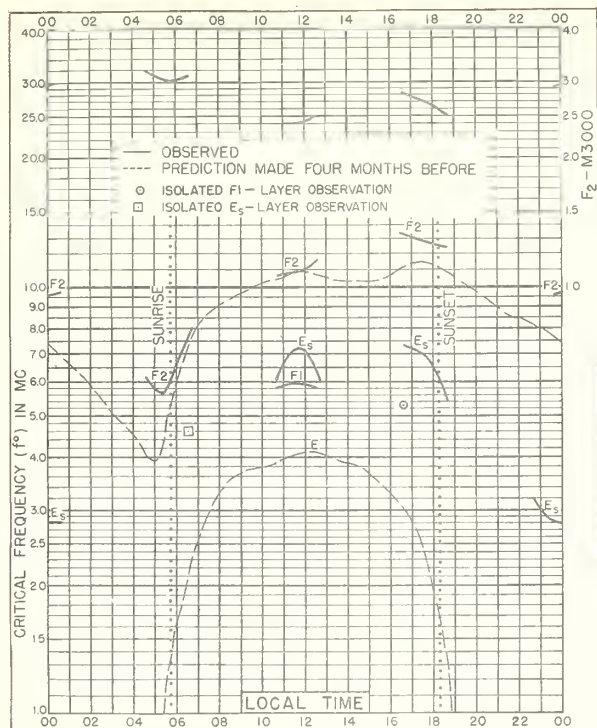


Fig. 33. GUAM I  
13.5°N, 144.8°E

AUGUST 1946

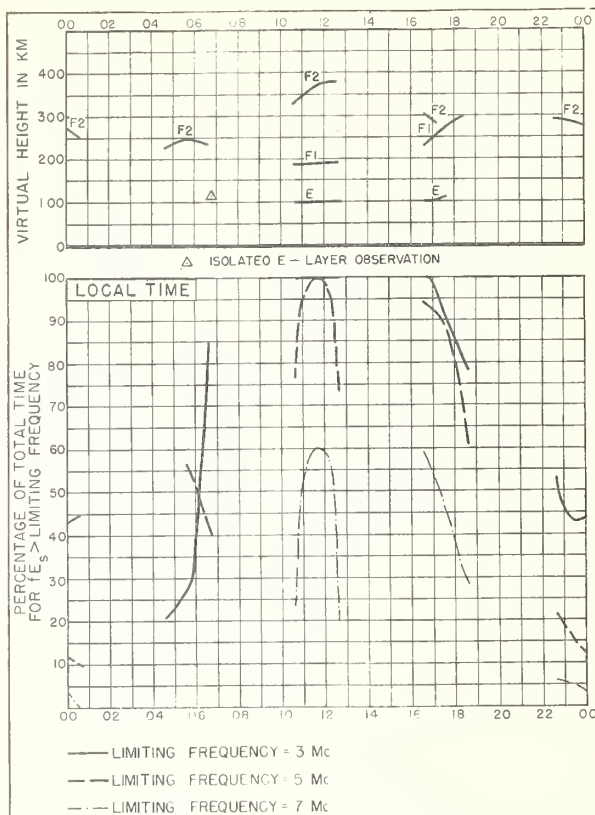


Fig. 34. GUAM I

AUGUST 1946

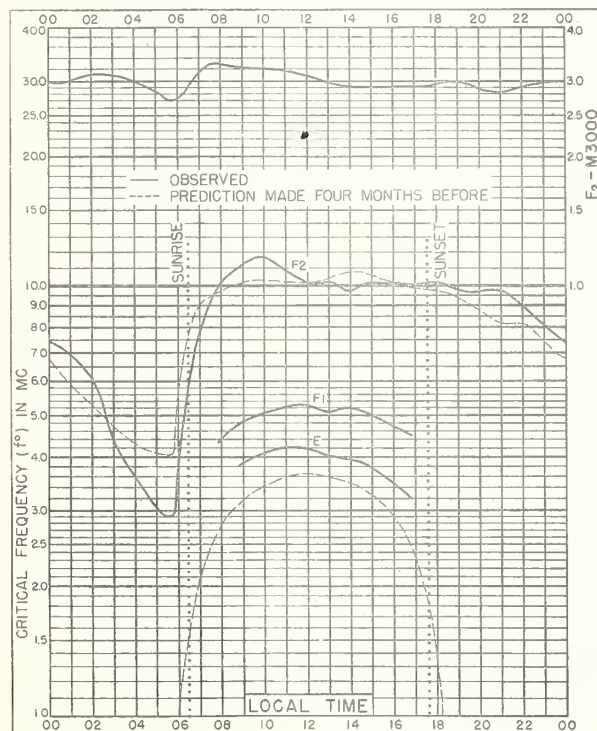


Fig. 35. RAROTONGA I.  
21.3°S, 159.8°W

AUGUST 1946

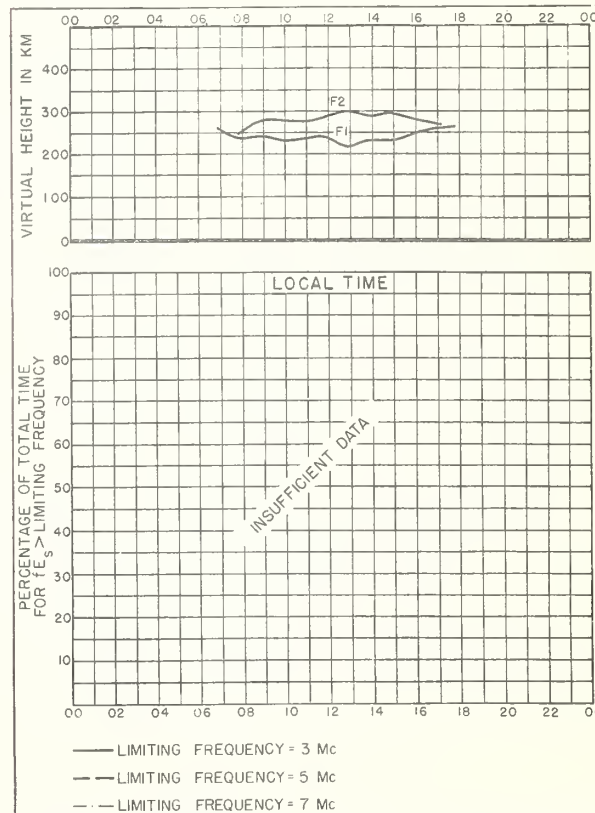


Fig. 36. RAROTONGA I.

AUGUST 1946

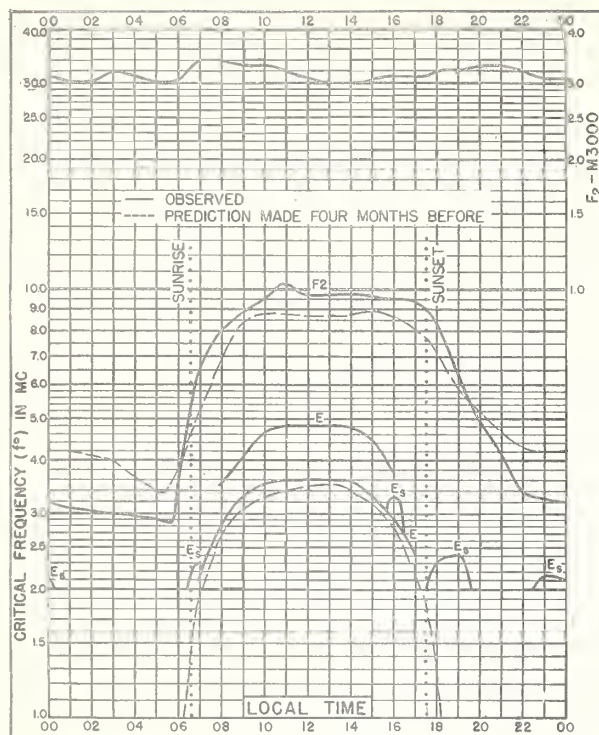


Fig. 37. JOHANNESBURG, U OF S. AFRICA  
26.2°S, 28.0°E AUGUST 1946

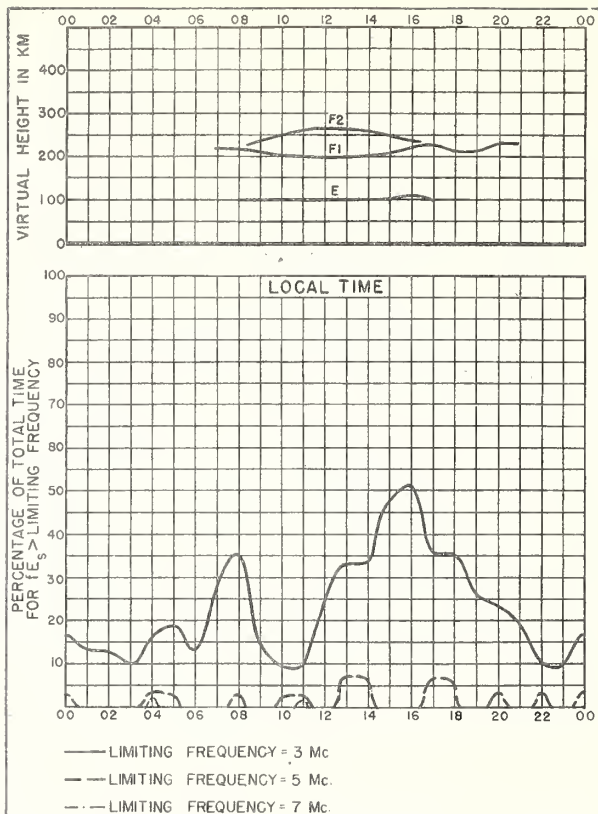


Fig. 38. JOHANNESBURG, U OF S. AFRICA AUGUST 1946

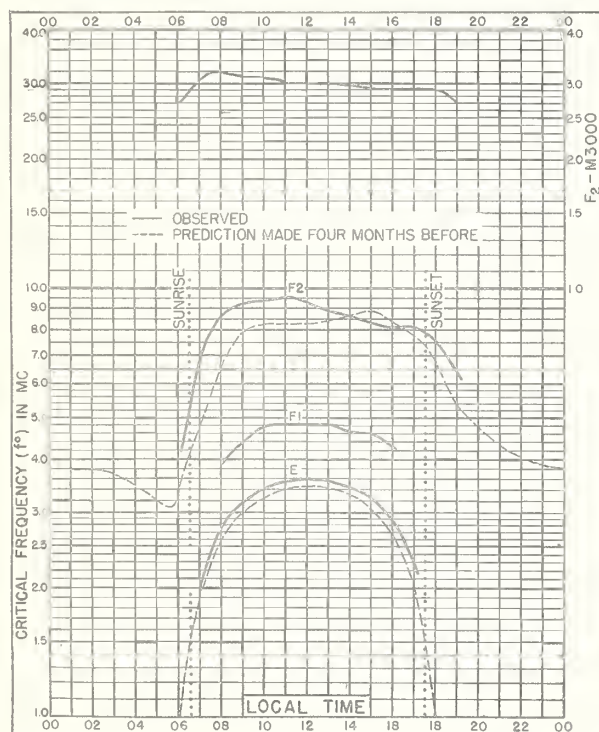


Fig. 39. KERMADEC IS.  
29.3°S, 177.9°W AUGUST 1946

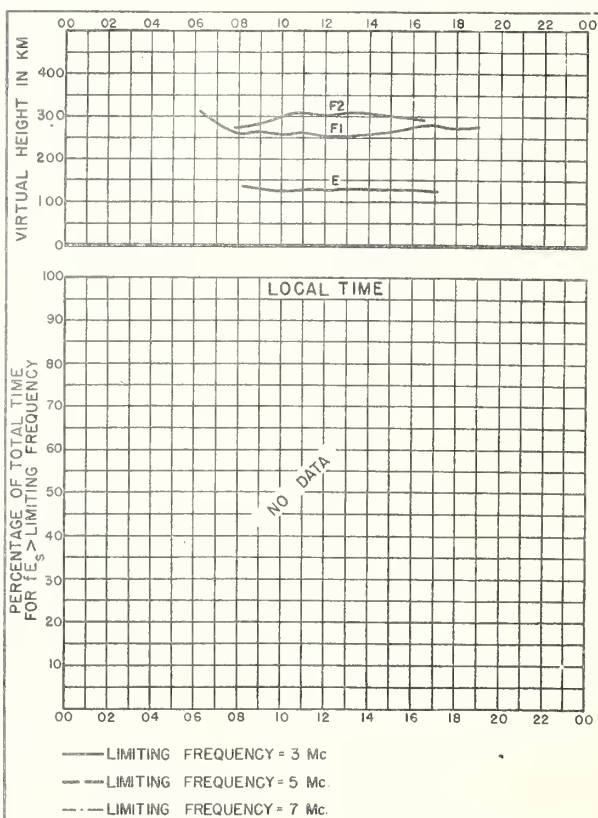


Fig. 40. KERMADEC IS. AUGUST 1946

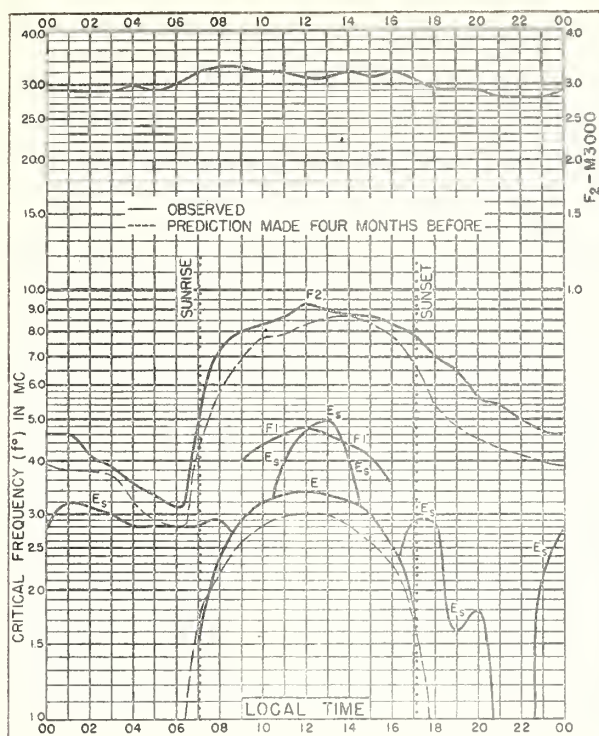


Fig. 41. CHRISTCHURCH, N.Z.  
43.5°S, 172.6°E

AUGUST 1946

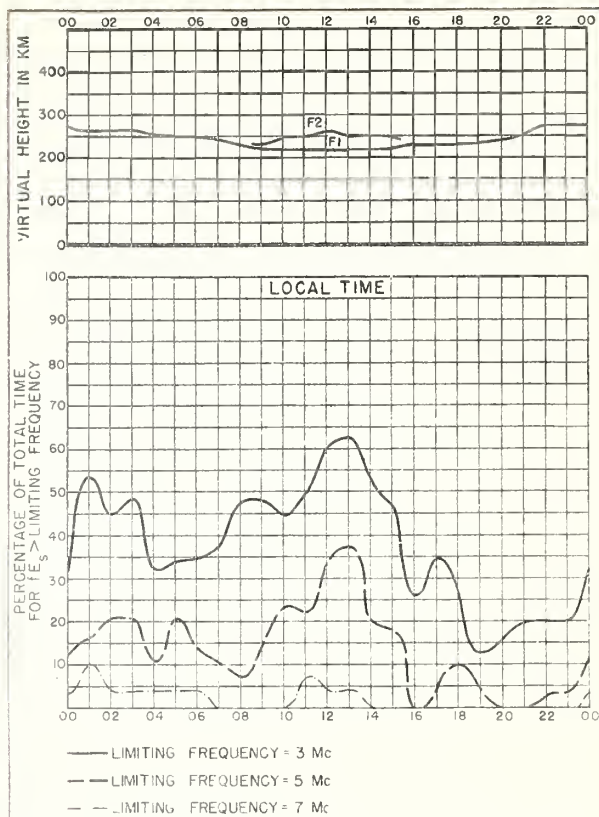


Fig. 42. CHRISTCHURCH, N.Z.

AUGUST 1946

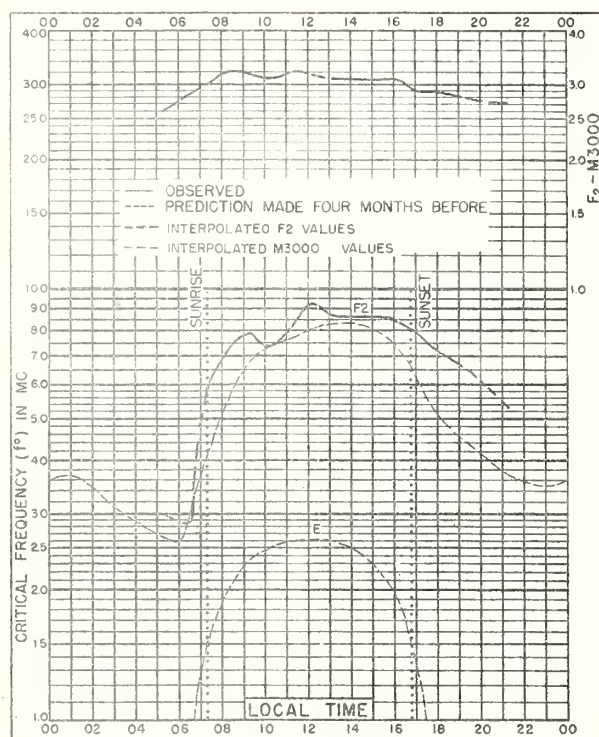


Fig. 43. CAMPBELL I.  
52.5°S, 169.2°E

AUGUST 1946



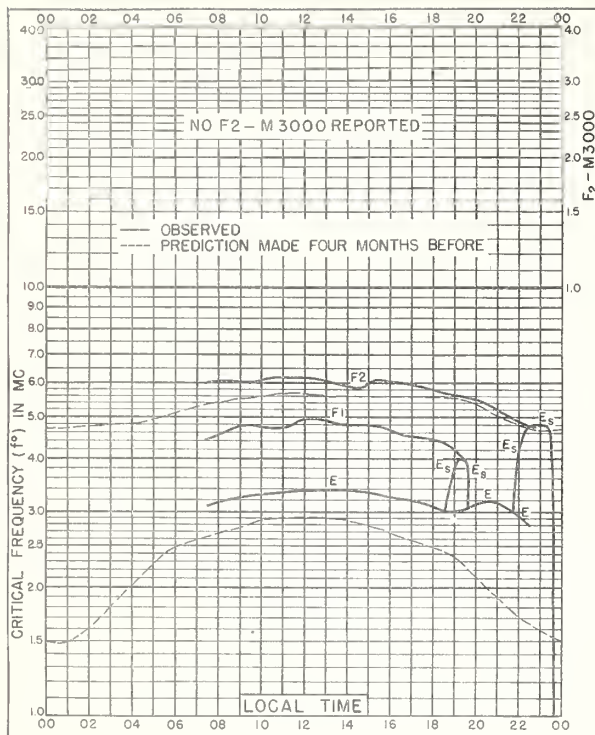


Fig. 44. TROMSØ, NORWAY  
69.7°N, 18.9°E

JULY 1946

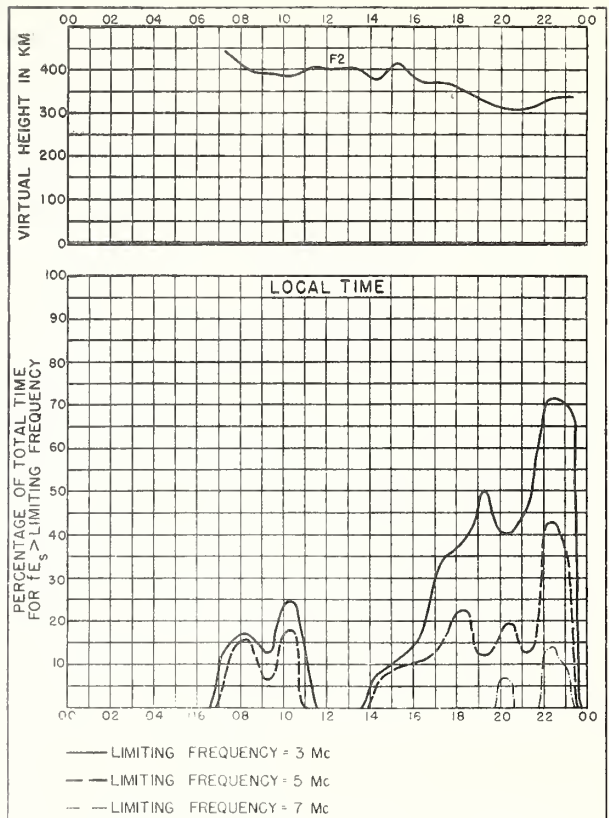


Fig. 45. TROMSØ, NORWAY

JULY 1946

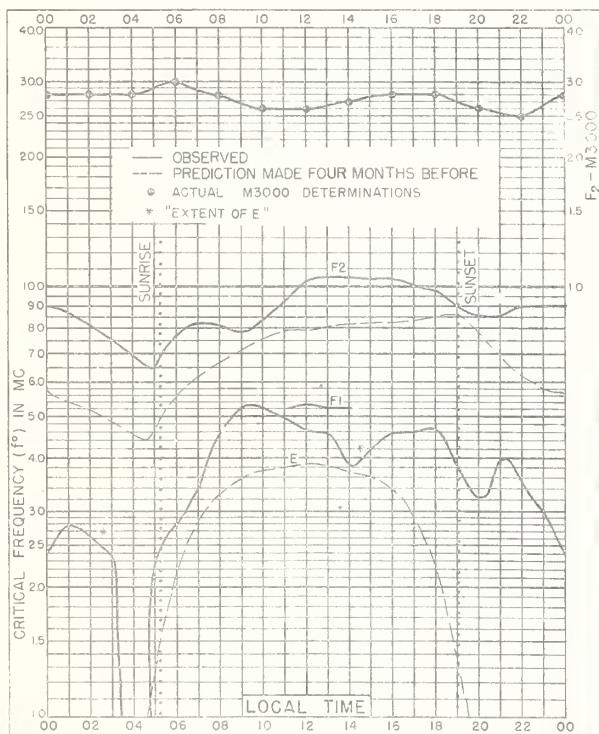


Fig. 46. CAIRO, EGYPT  
30.6°N, 31.9°E

JULY 1946

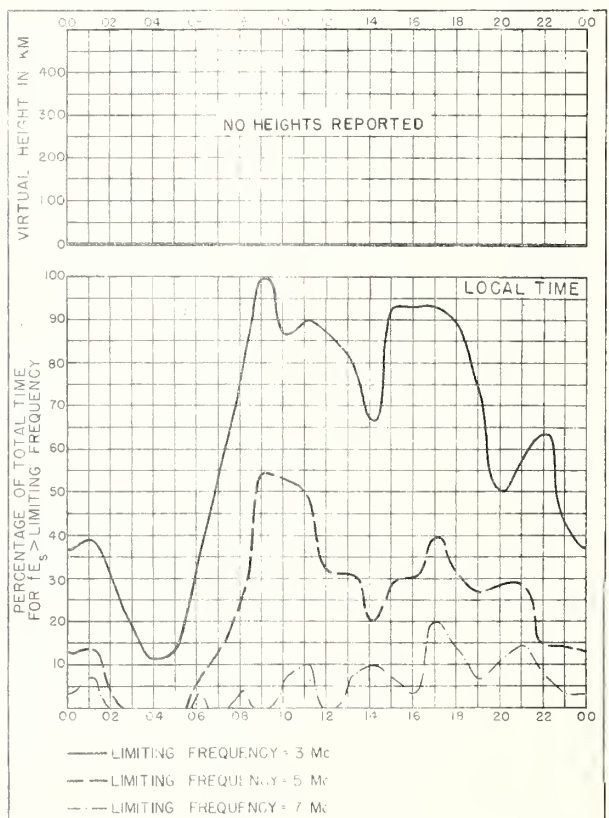


Fig. 47. CAIRO, EGYPT

JULY 1946



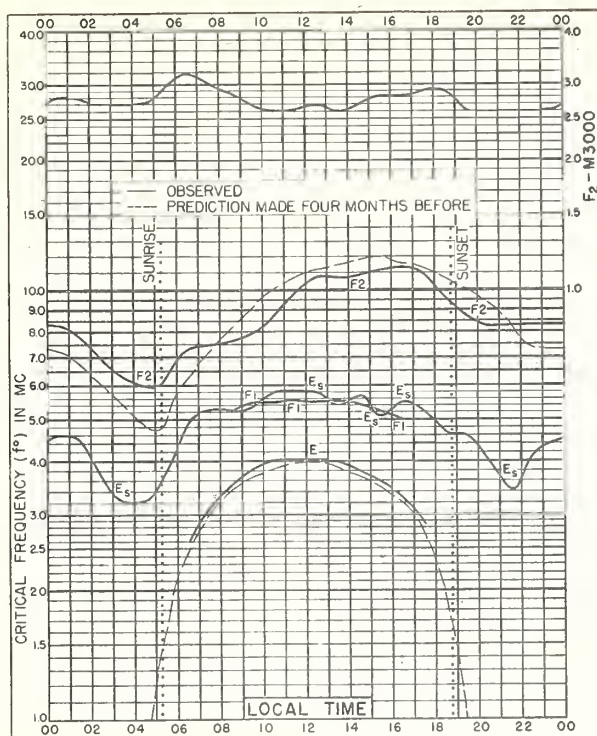


Fig. 48 OKINAWA I.  
26.3°N, 127.8°E

JULY 1946

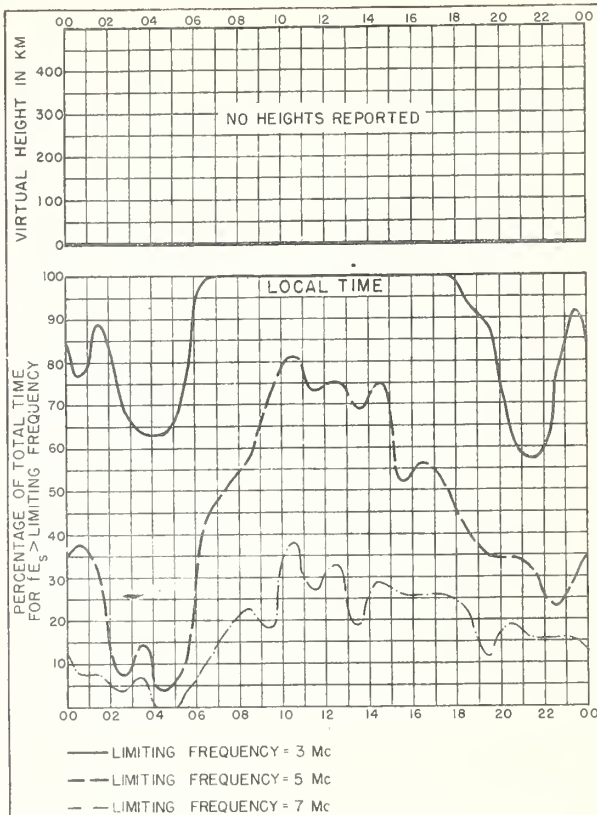


Fig. 49 OKINAWA I.

JULY 1946

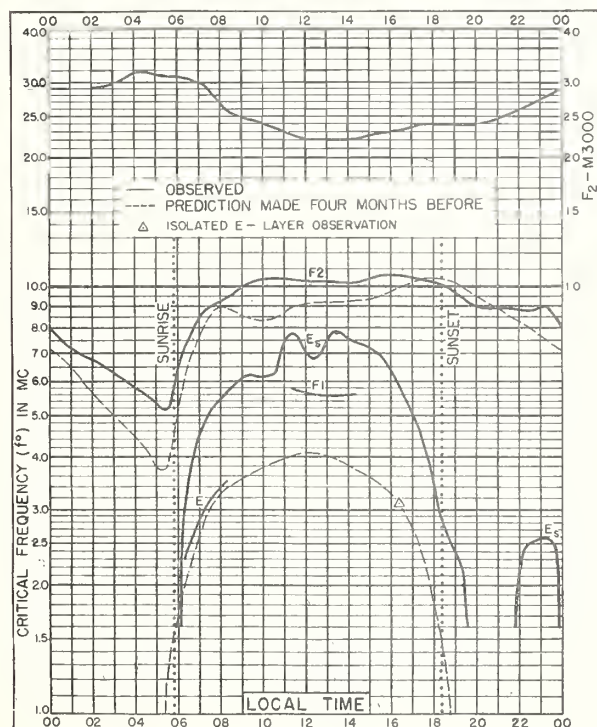


Fig. 50 LEYTE, PHILIPPINE IS.  
11.0°N, 125.0°E

JULY 1946

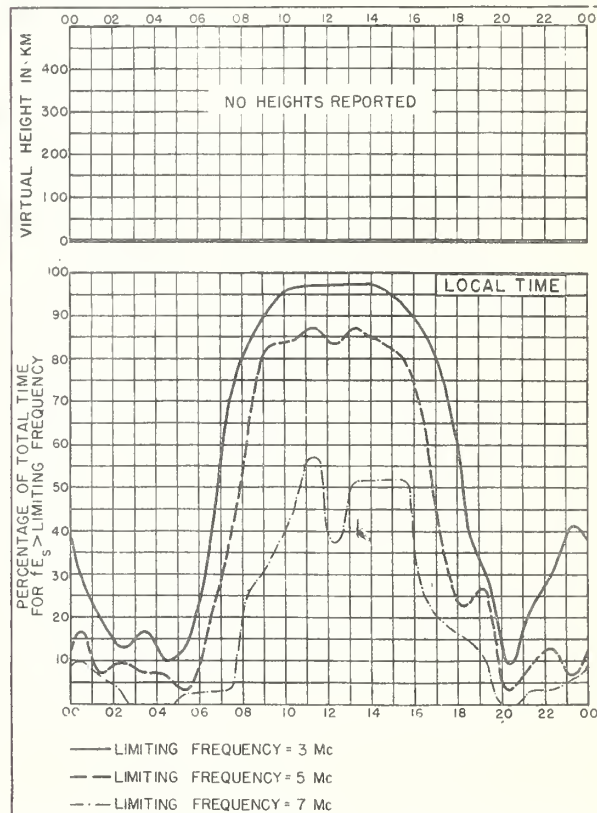
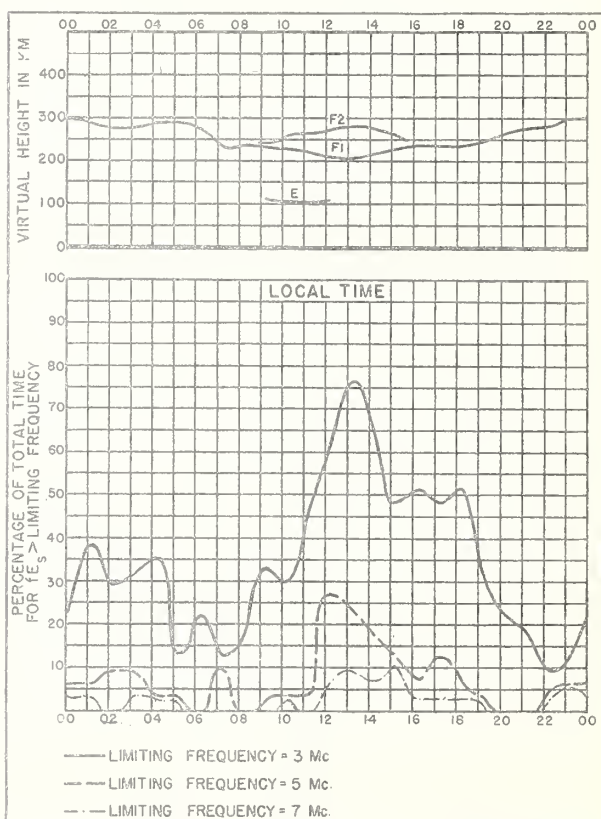
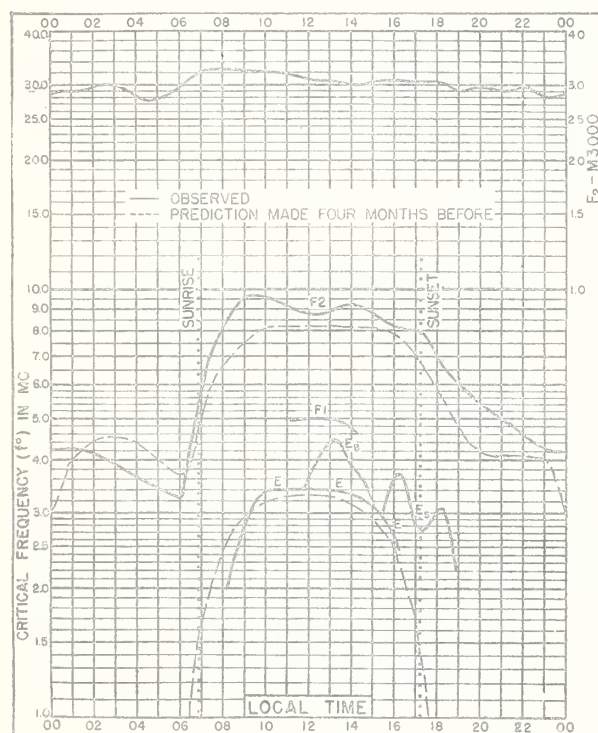
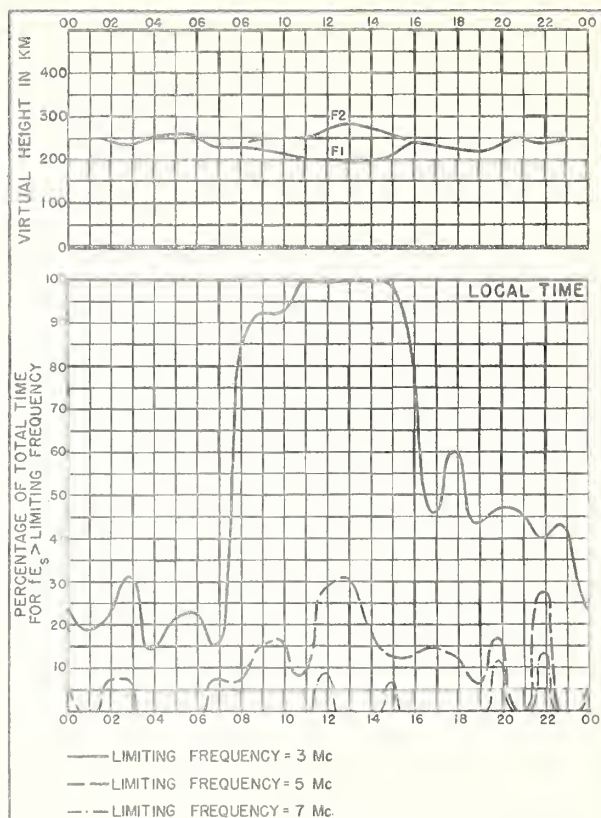
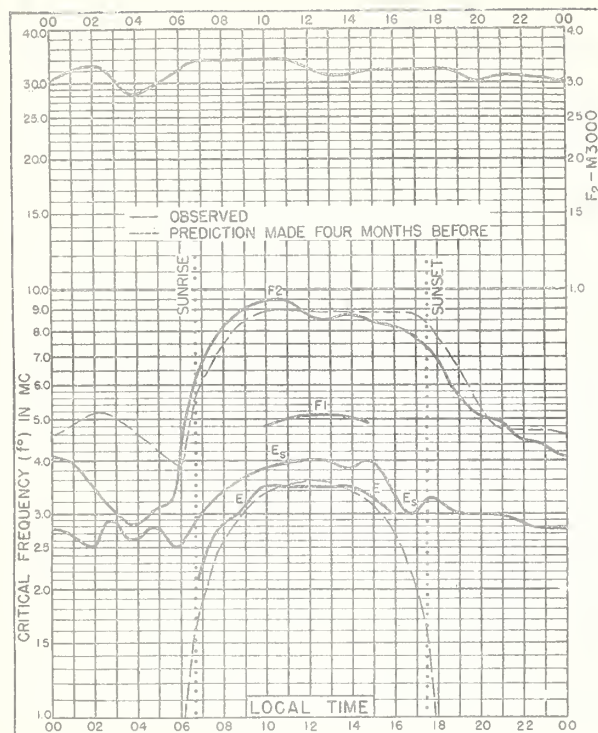


Fig. 51 LEYTE, PHILIPPINE IS.

JULY 1946





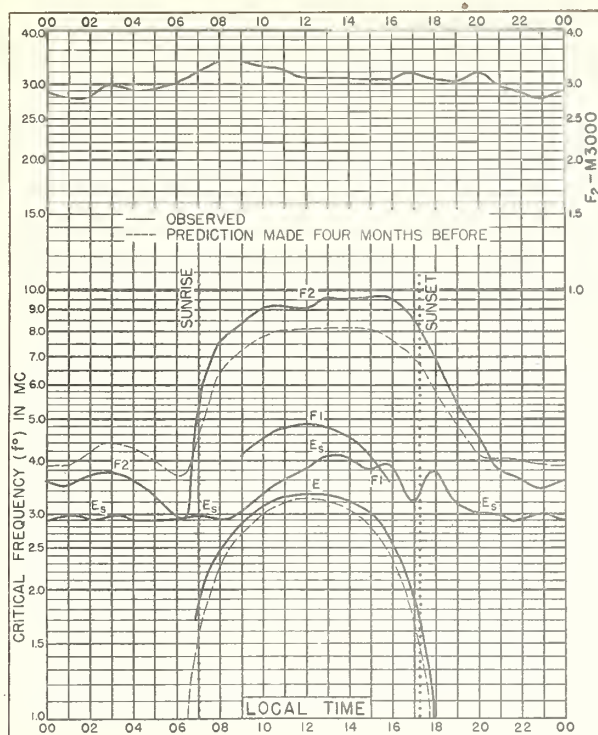


Fig. 56. WATHEROO, W. AUSTRALIA  
30.3°S, 115.9°E

JULY 1946

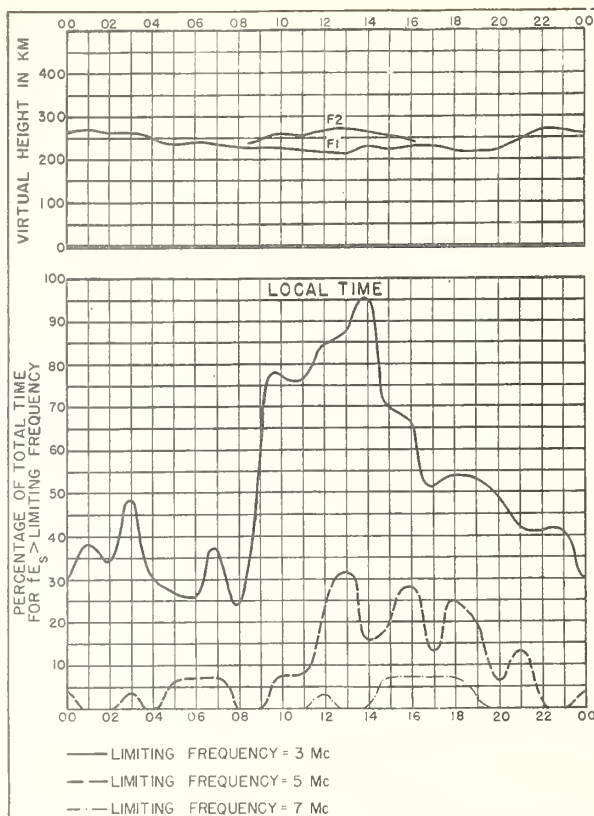


Fig. 57. WATHEROO, W. AUSTRALIA

JULY 1946

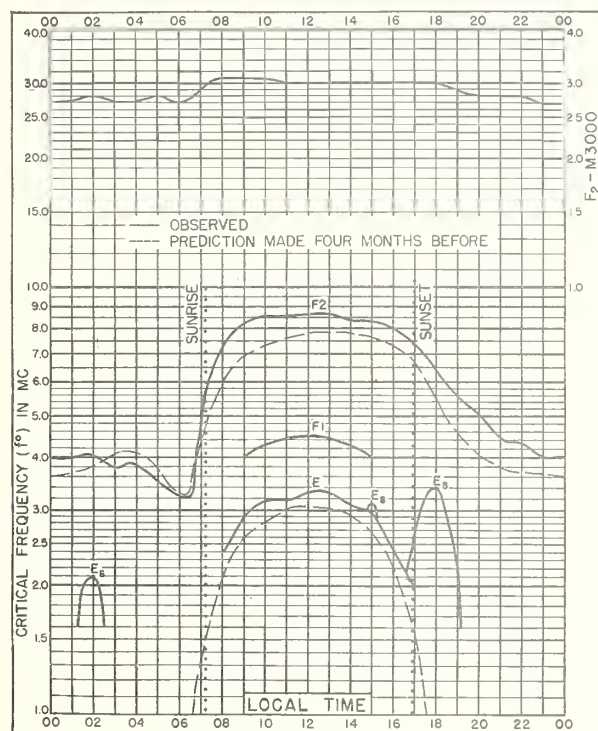


Fig. 58. CANBERRA (MT. STROMLO), AUSTRALIA  
35.3°S, 149.0°E

JULY 1946

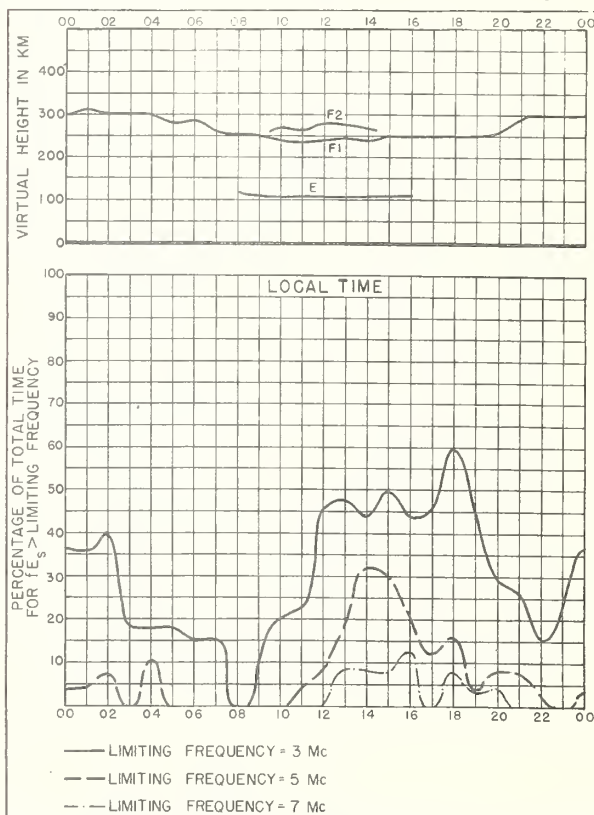


Fig. 59. CANBERRA (MT. STROMLO), AUSTRALIA

JULY 1946

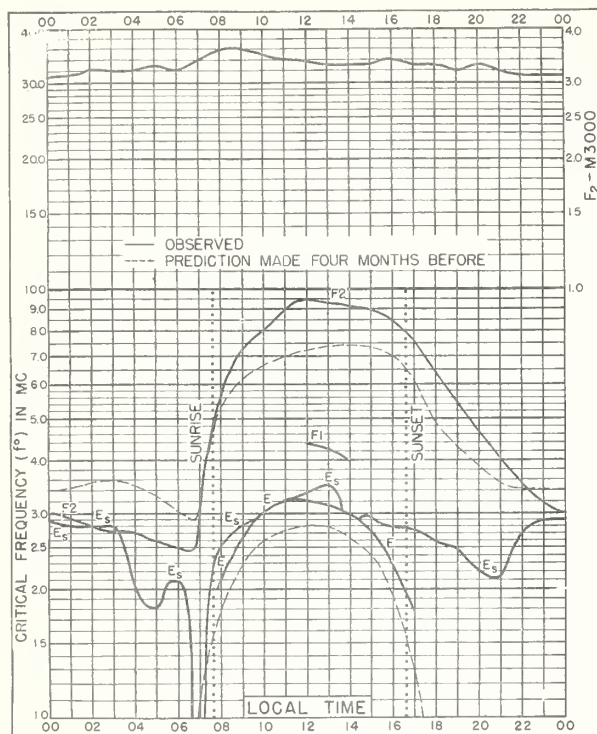


Fig 60. HOBART, TASMANIA  
42.8°S, 147.4°E

JULY 1946

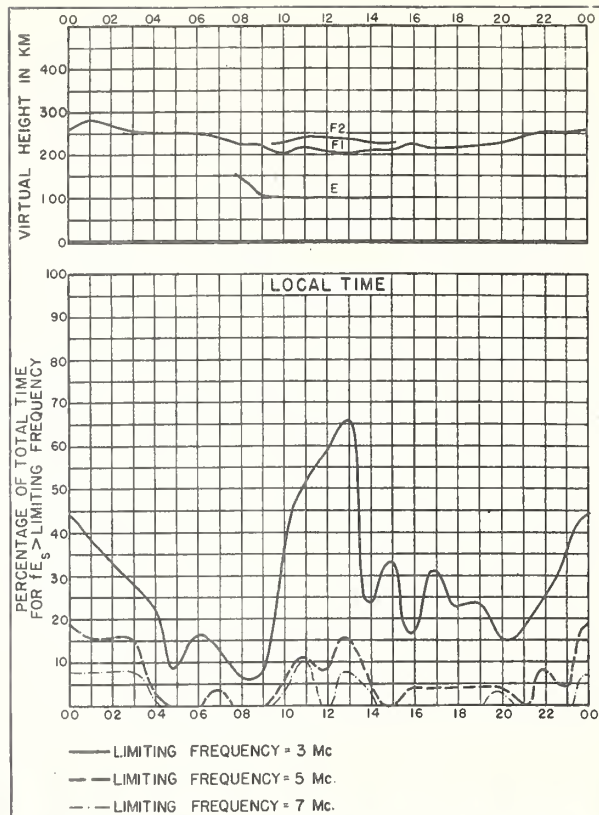


Fig 61. HOBART, TASMANIA

JULY 1946

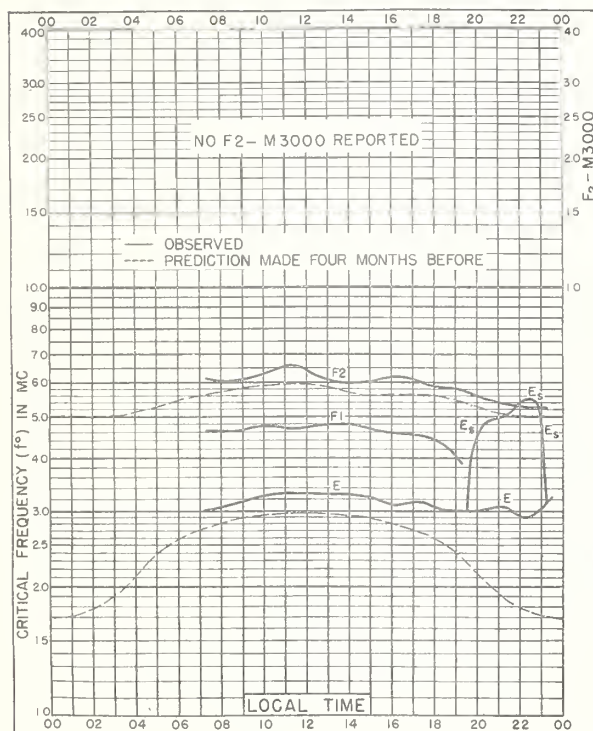


Fig 62. TROMSØ, NORWAY  
69.7°N, 18.9°E

JUNE 1946

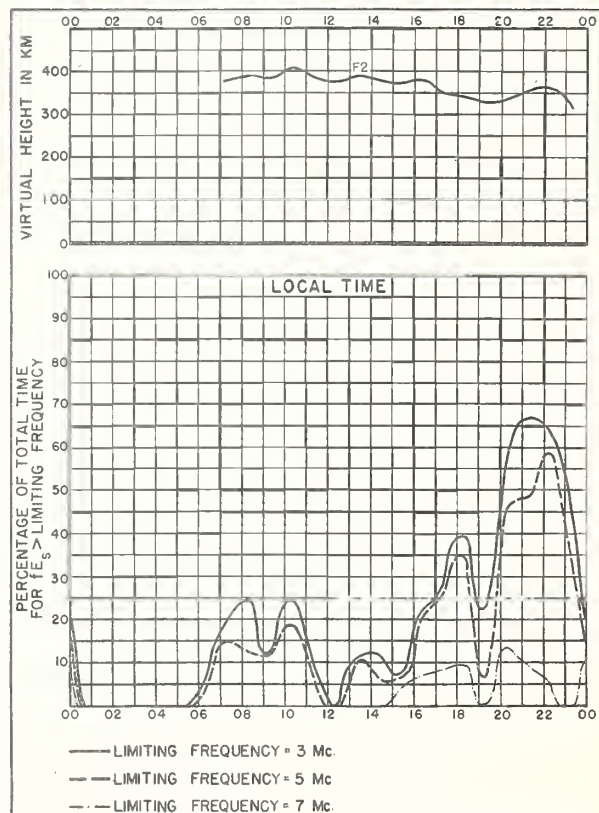


Fig 63. TROMSØ, NORWAY

JUNE 1946



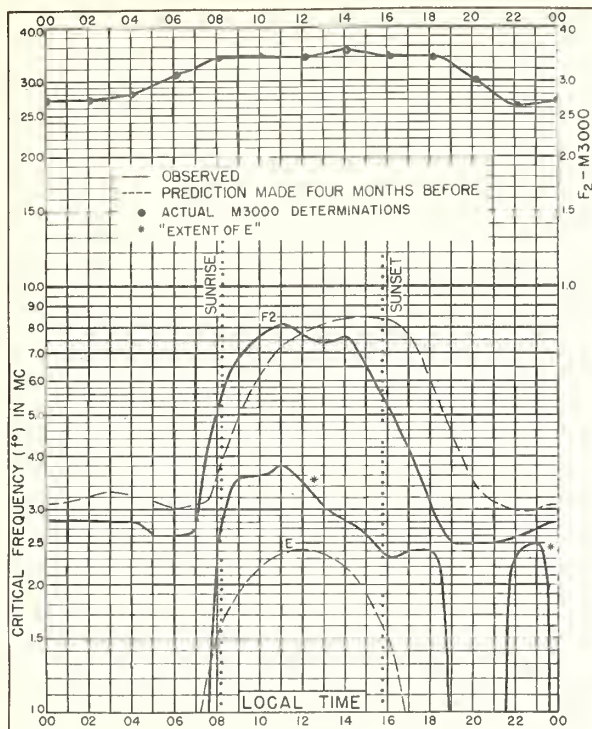


Fig. 64. FALKLAND IS.  
51.7°S, 57.7°W

JUNE 1946

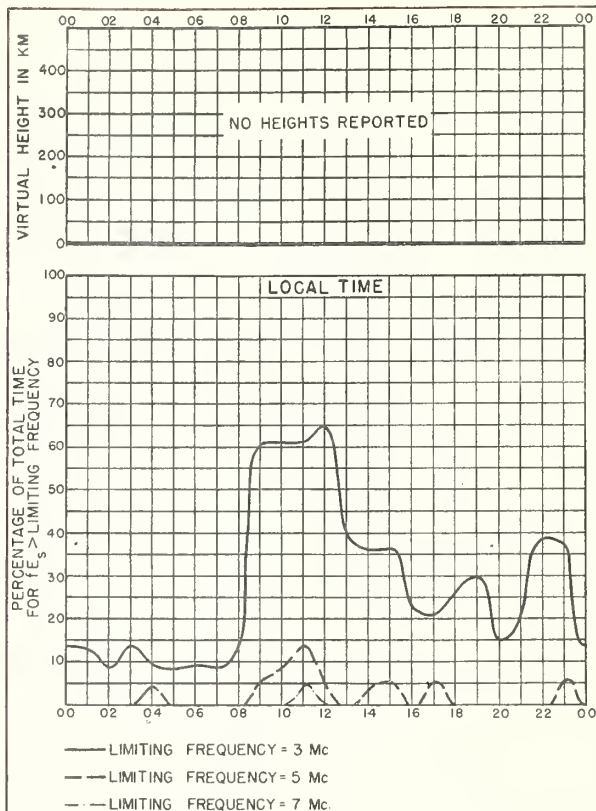


Fig. 65. FALKLAND IS.

JUNE 1946

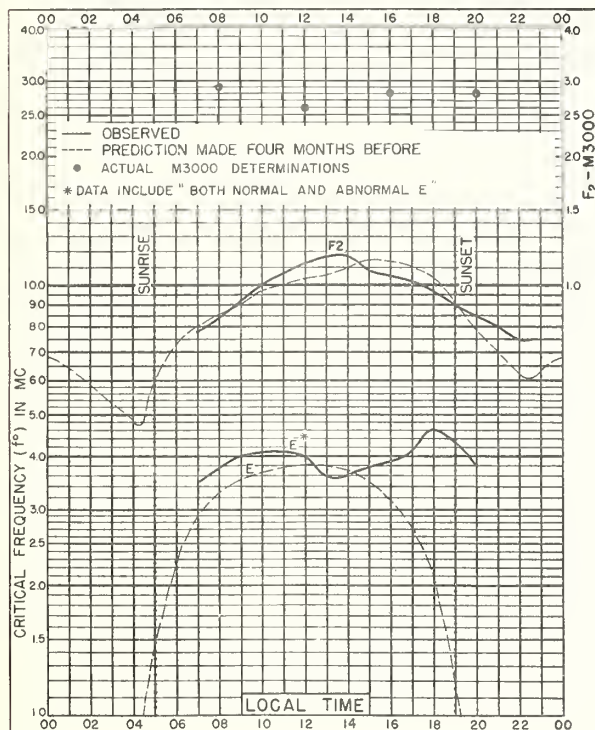


Fig. 66. PESHAWAR, INDIA  
34.0°N, 71.5°E

MAY 1946

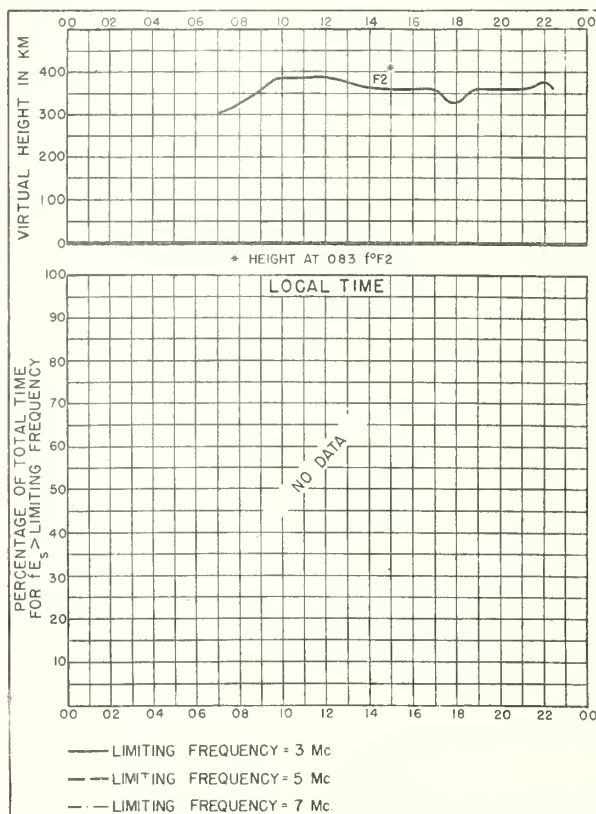


Fig. 67. PESHAWAR, INDIA

MAY 1946

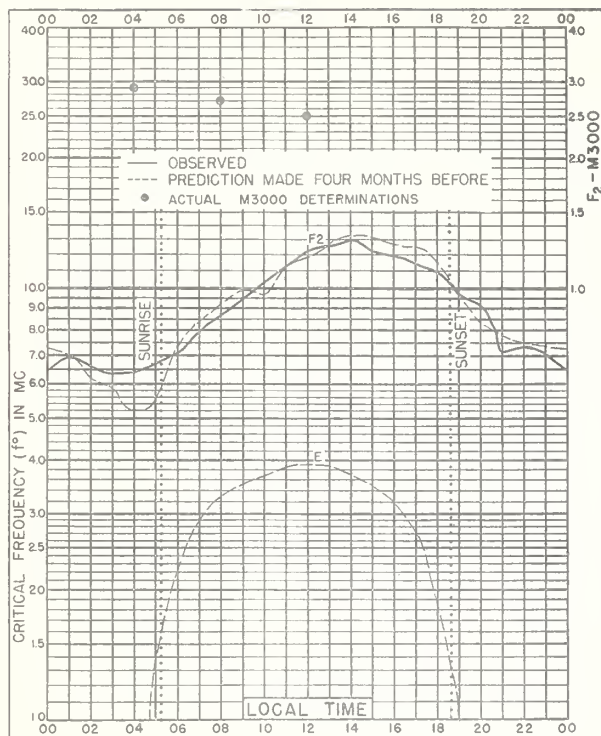


Fig 68. DELHI, INDIA  
28.6°N, 77.1°E

MAY 1946

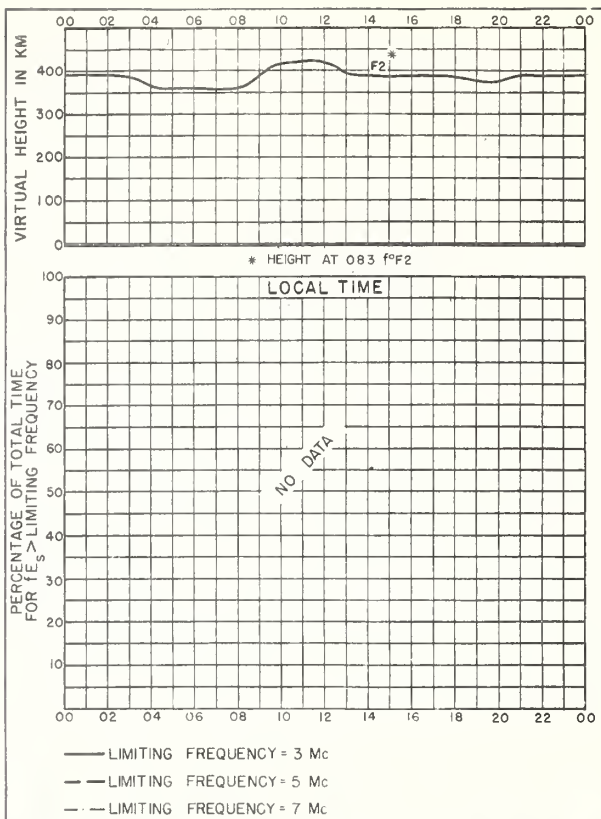


Fig 69. DELHI, INDIA

MAY 1946

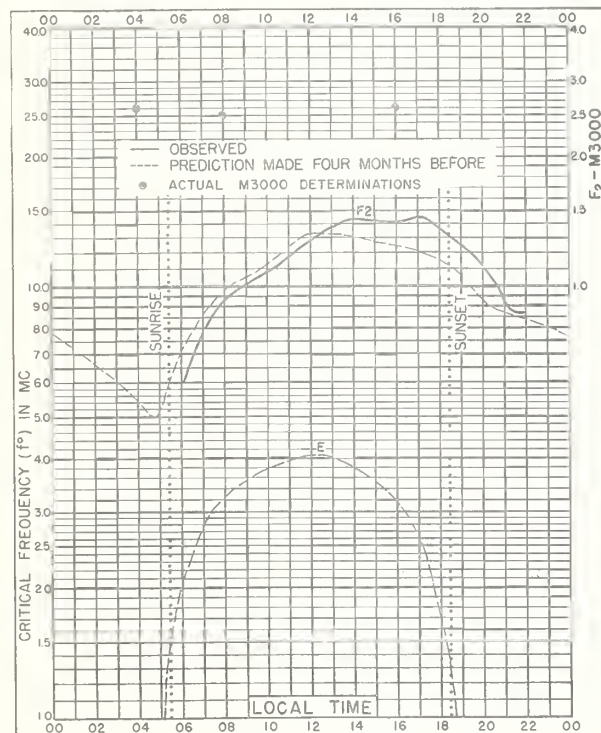


Fig 70. BOMBAY, INDIA  
19.0°N, 73.0°E

MAY 1946

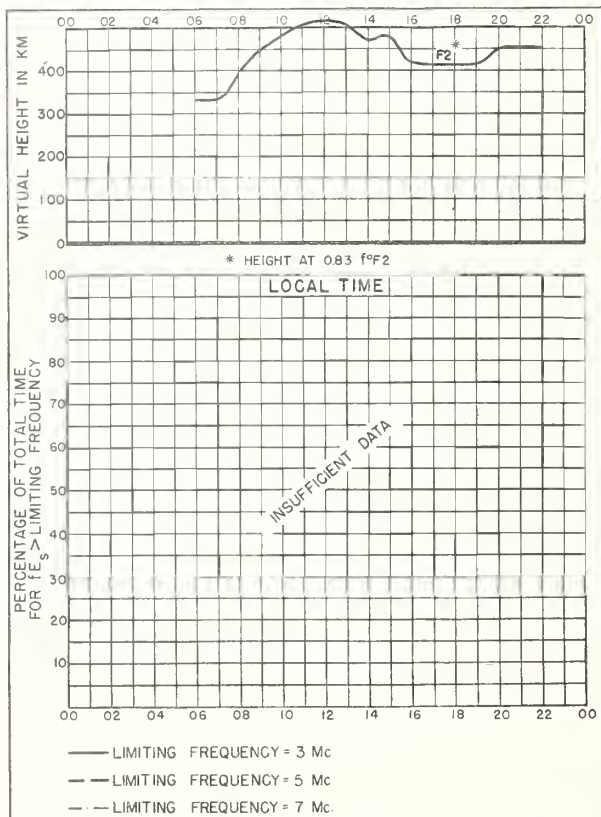


Fig 71. BOMBAY, INDIA

MAY 1946



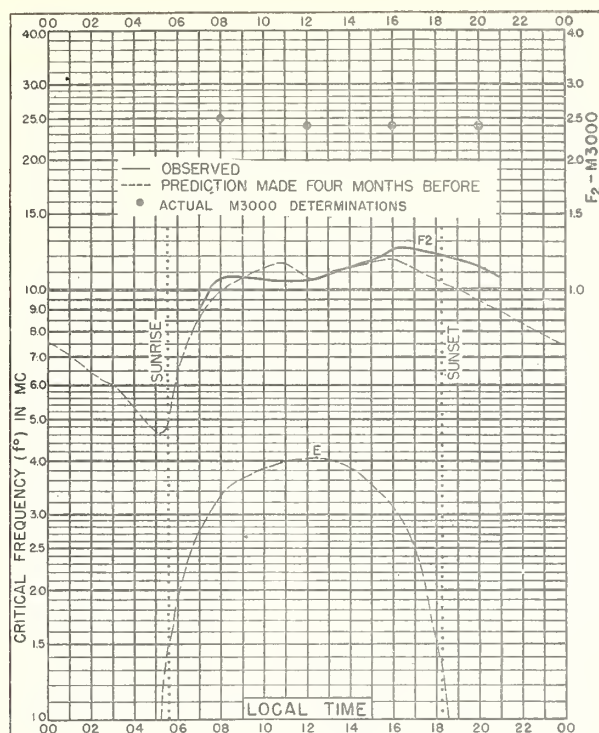


Fig 72. MADRAS, INDIA  
13.0°N, 80.2°E

MAY 1946

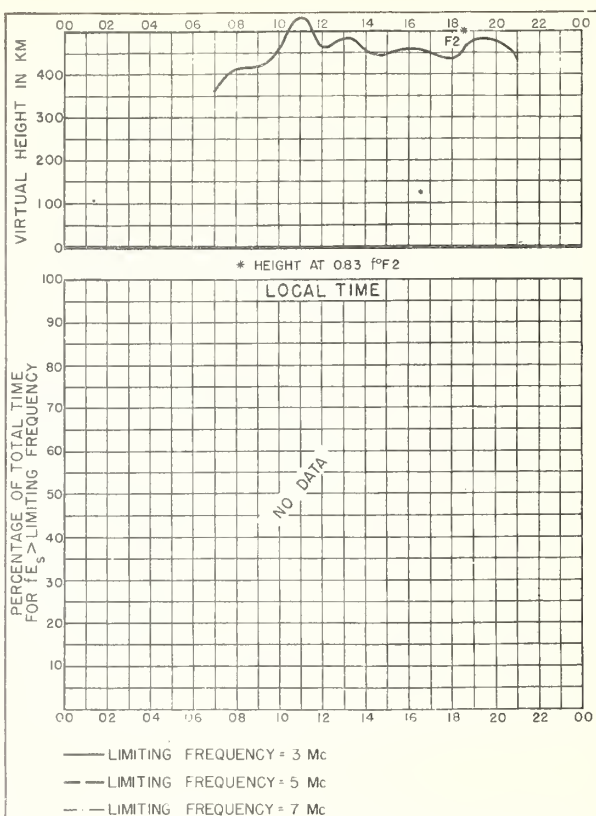


Fig 73. MADRAS, INDIA

MAY 1946

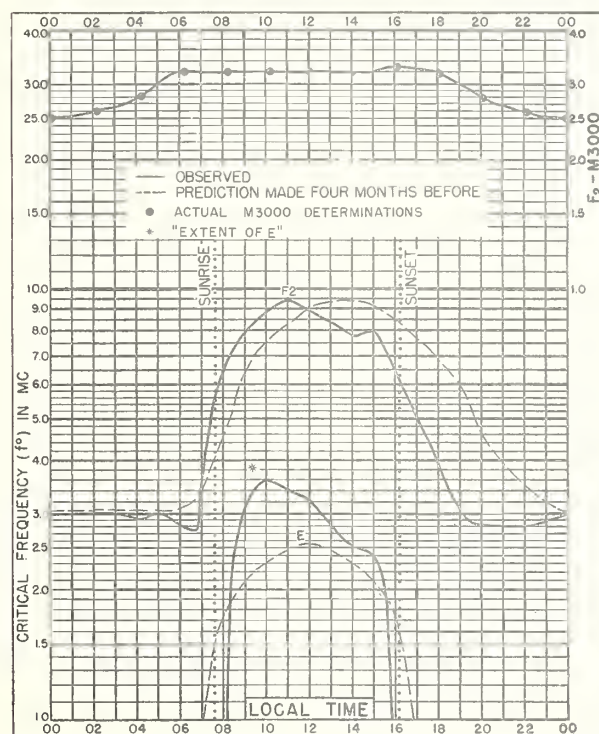


Fig 74. FALKLAND IS.  
51.7°S, 57.7°W

MAY 1946

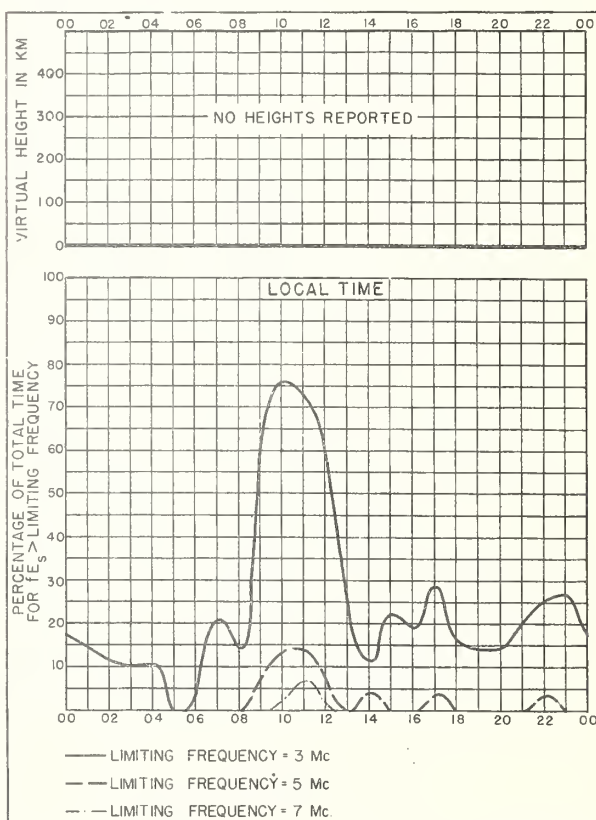


Fig 75. FALKLAND IS.

MAY 1946

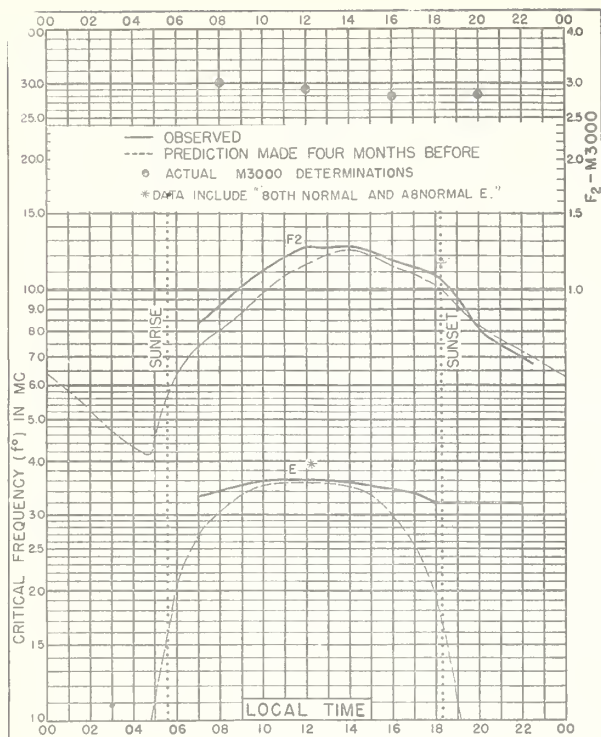


Fig 76. PESHAWAR, INDIA  
34.0°N, 71.5°E

APRIL 1946

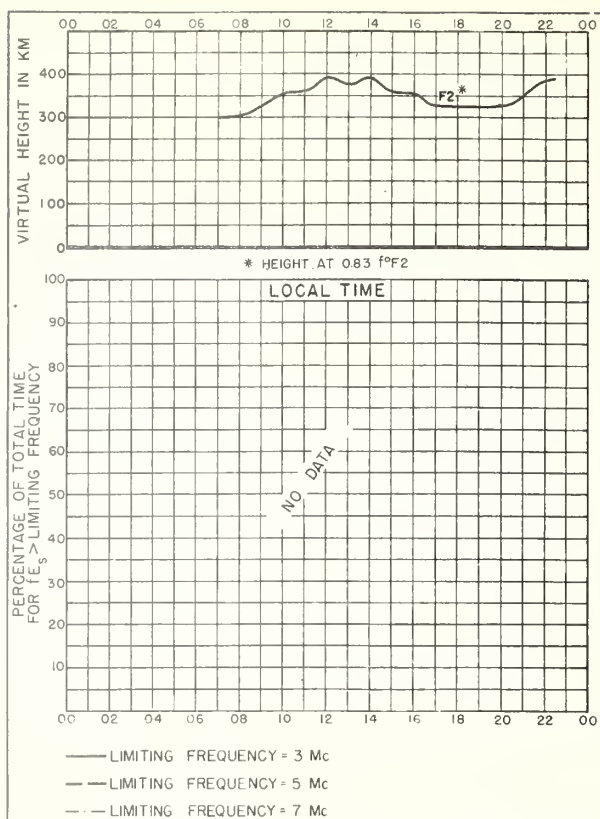


Fig. 77. PESHAWAR, INDIA

APRIL 1946

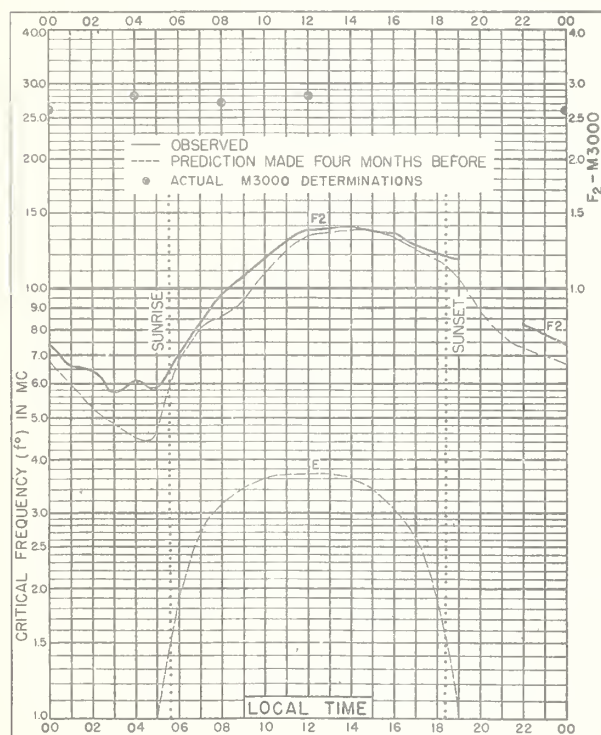


Fig 78. DELHI, INDIA  
28.6°N, 77.1°E

APRIL 1946

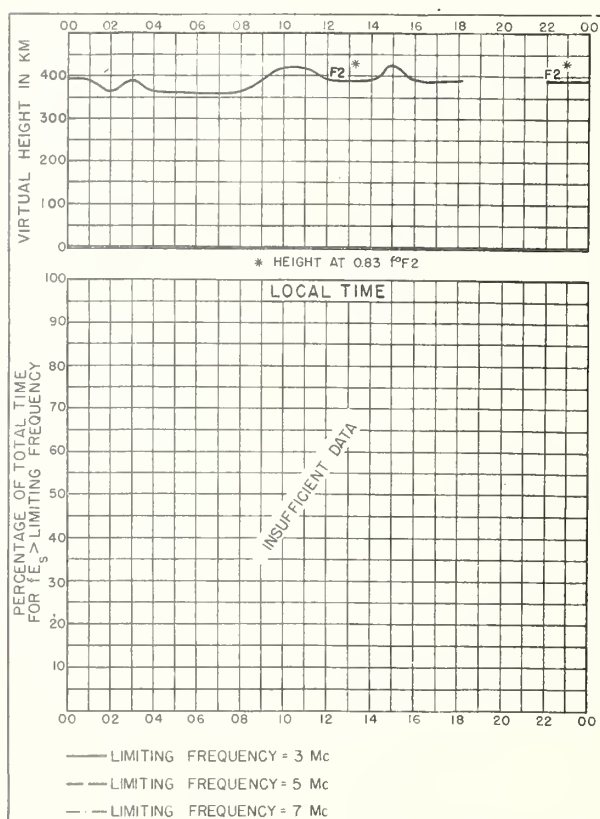
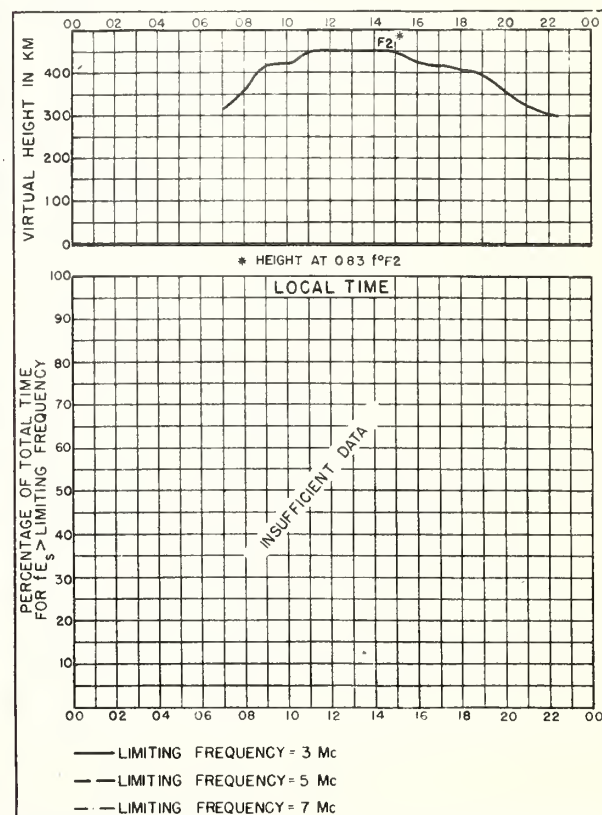
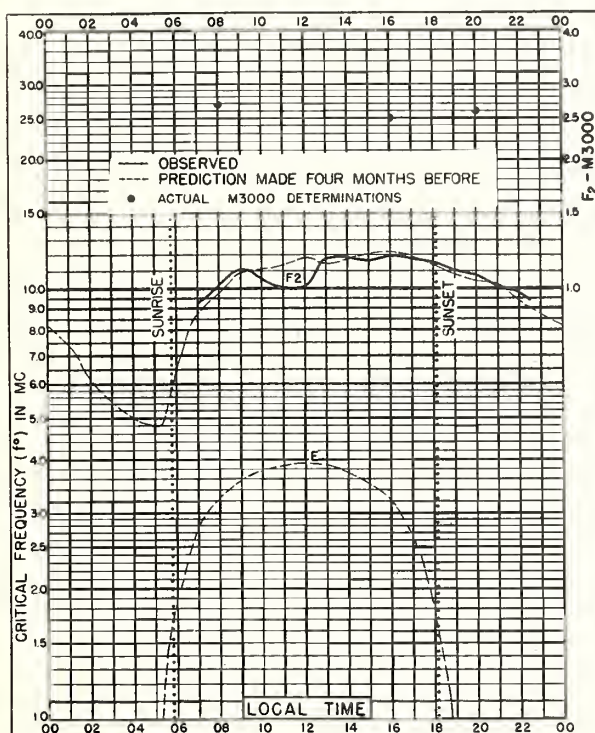
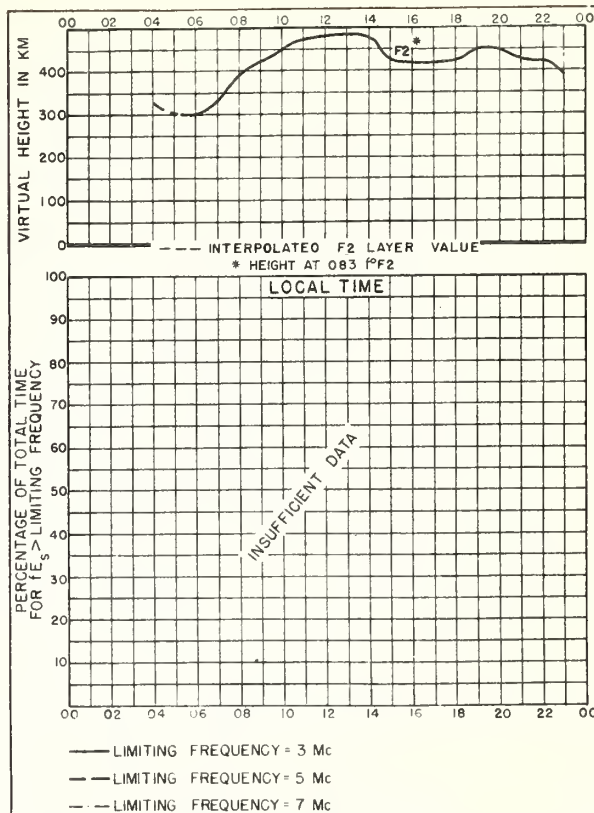
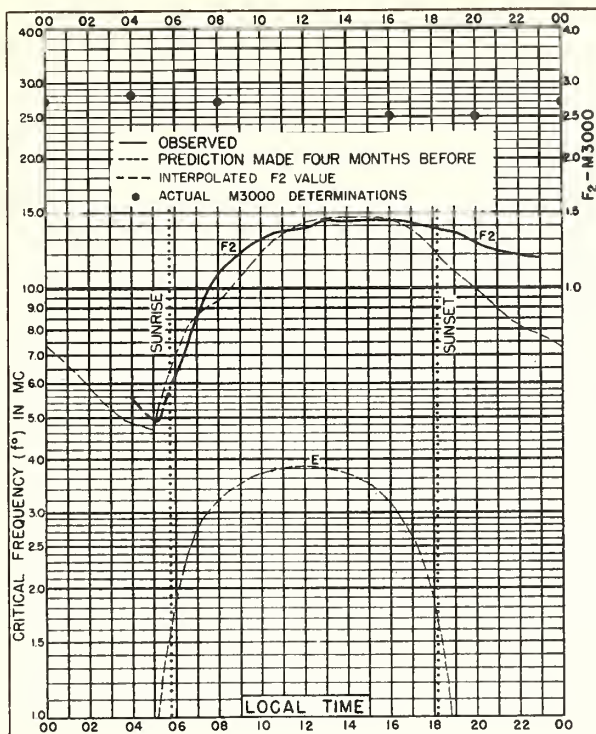


Fig. 79. DELHI, INDIA

APRIL 1946





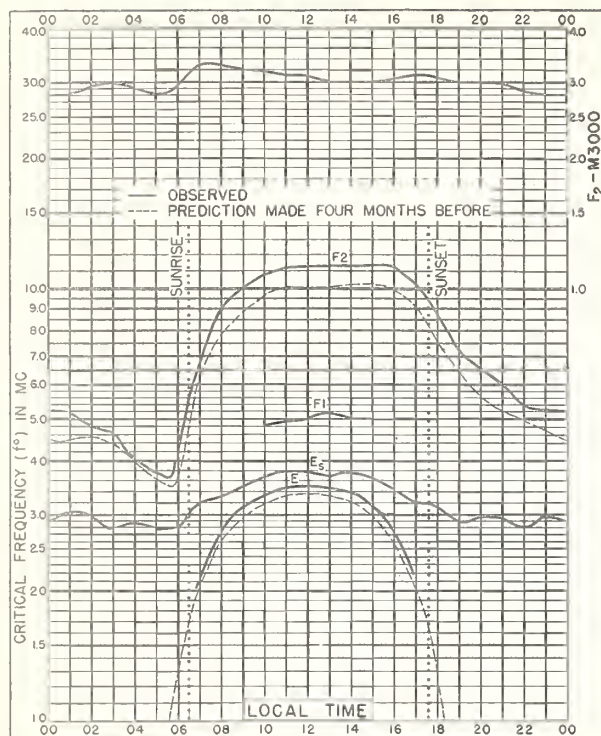


Fig. 84 WATHEROO, W. AUSTRALIA  
30°3'S, 115°9'E

APRIL 1946

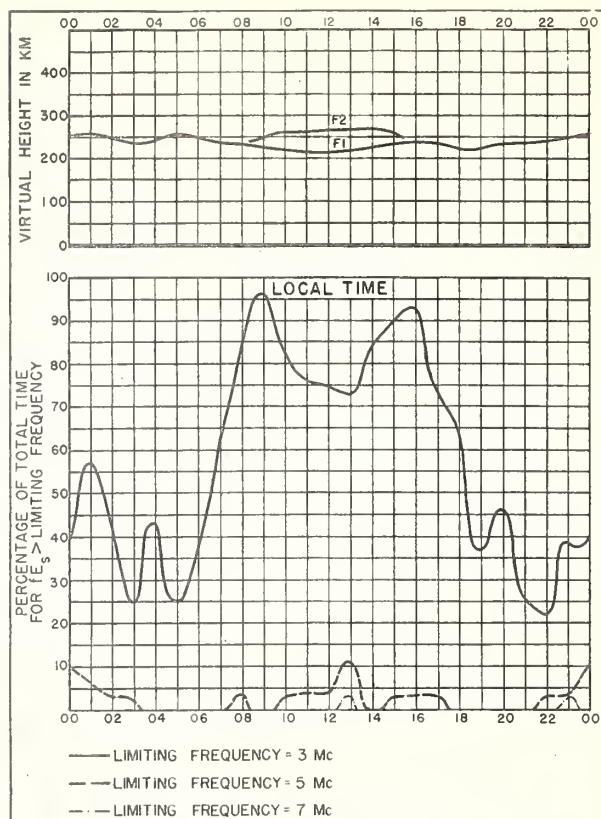


Fig. 85. WATHEROO, W. AUSTRALIA

APRIL 1946

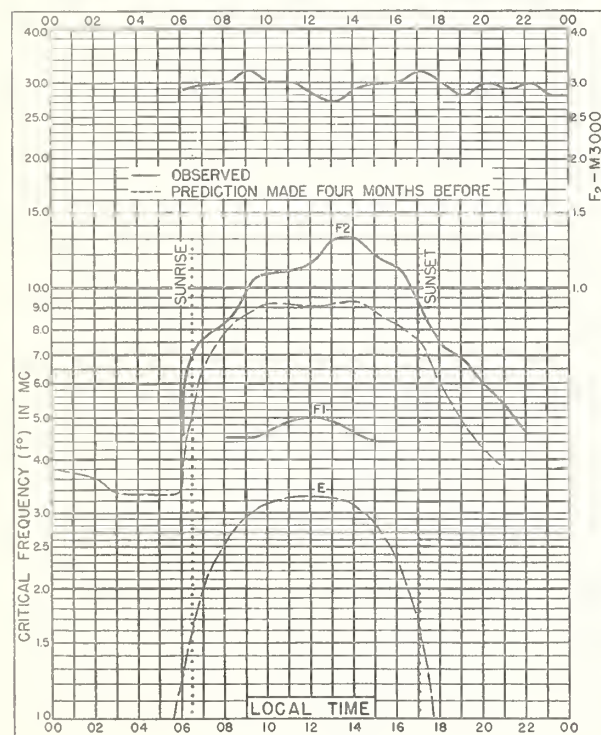


Fig. 86. CHUNGKING, CHINA  
29°4'N, 106°8'E

NOVEMBER 1945

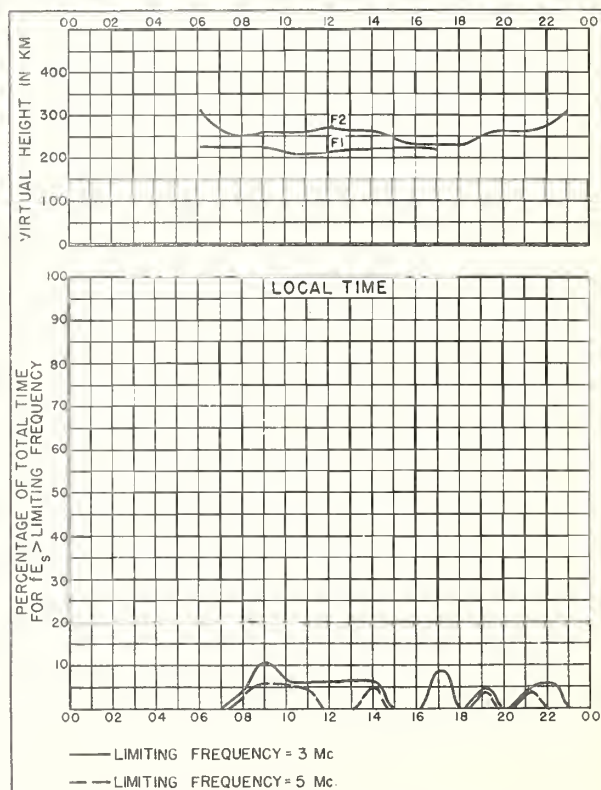


Fig. 87. CHUNGKING, CHINA

NOVEMBER 1945



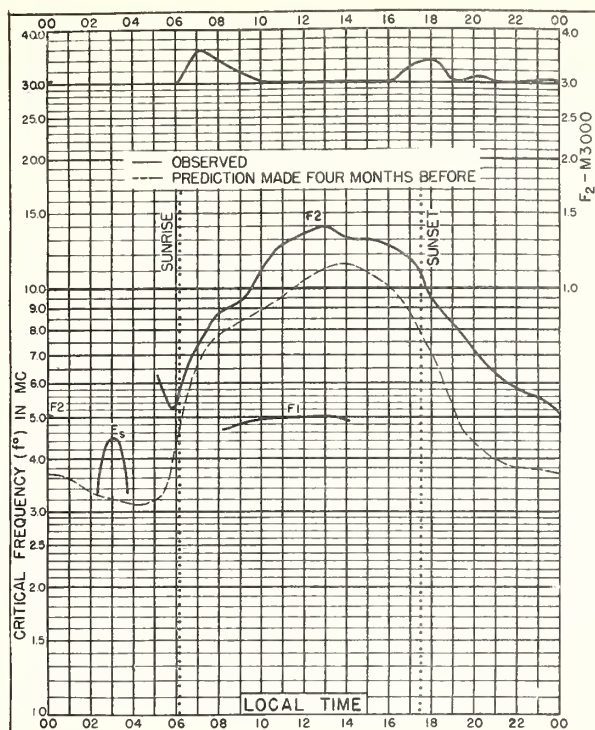


Fig. 88. CHUNGKING, CHINA  
29.4°N, 106.8°E

OCTOBER 1945

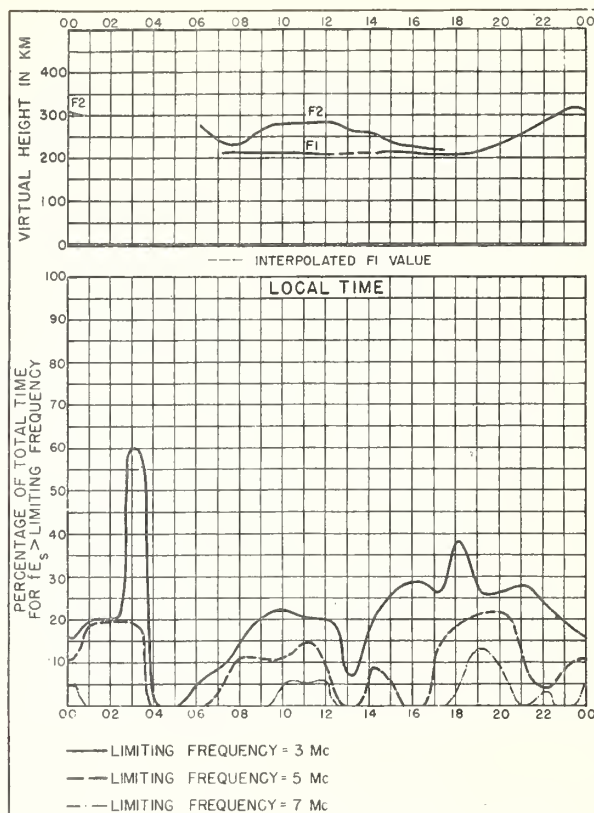


Fig. 89. CHUNGKING, CHINA

OCTOBER 1945

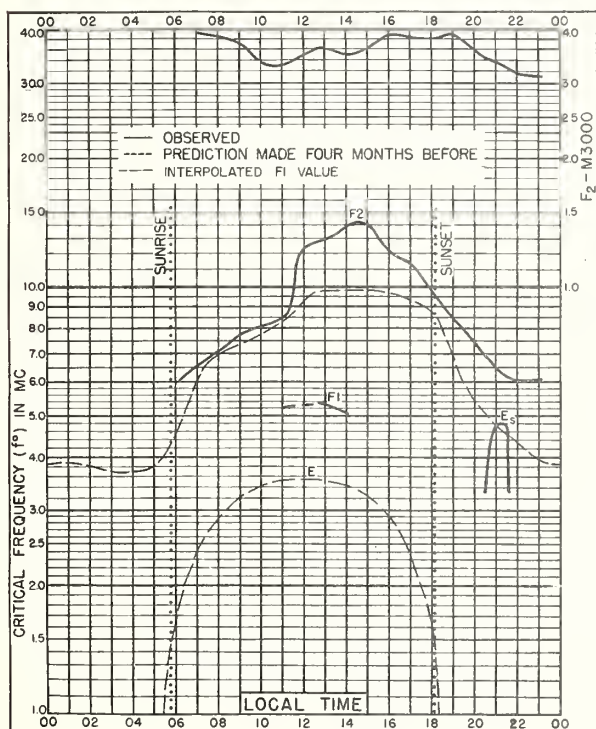


Fig. 90. CHUNGKING, CHINA  
29.4°N, 106.8°E

SEPTEMBER 1945

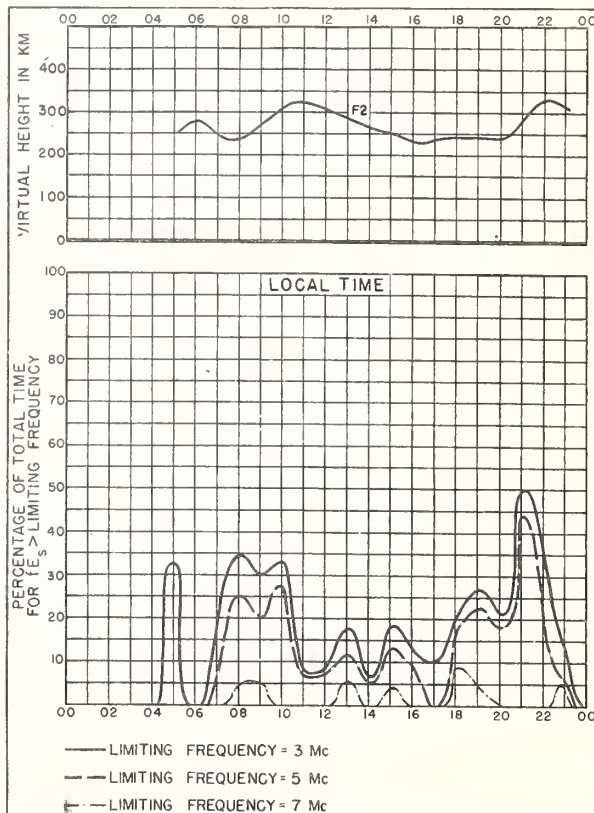


Fig. 91. CHUNGKING, CHINA

SEPTEMBER 1945

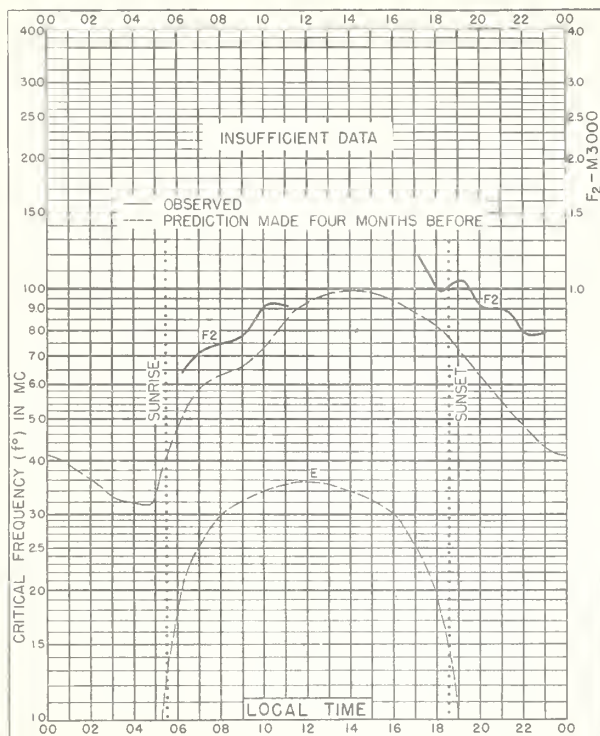


Fig 92. CHUNGKING, CHINA  
29 4°N, 106 8°E

AUGUST 1945

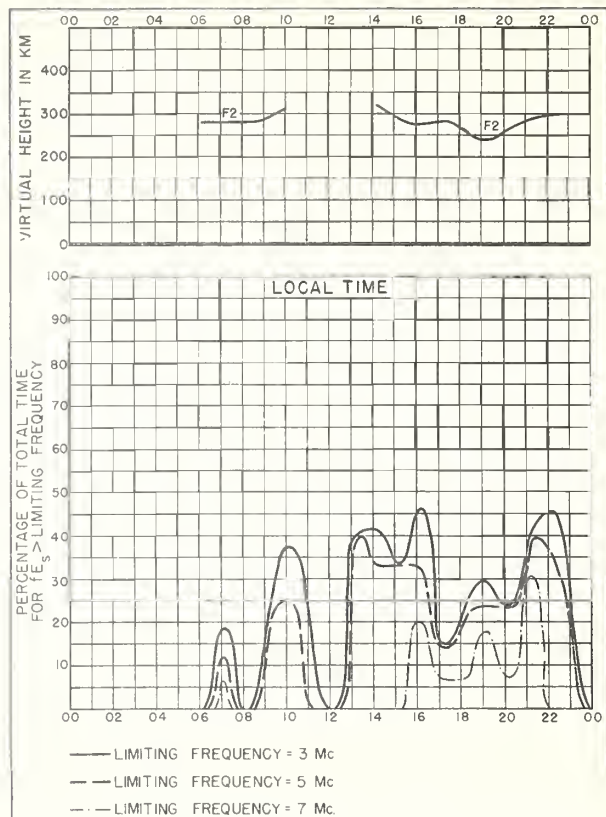


Fig 93. CHUNGKING, CHINA

AUGUST 1945

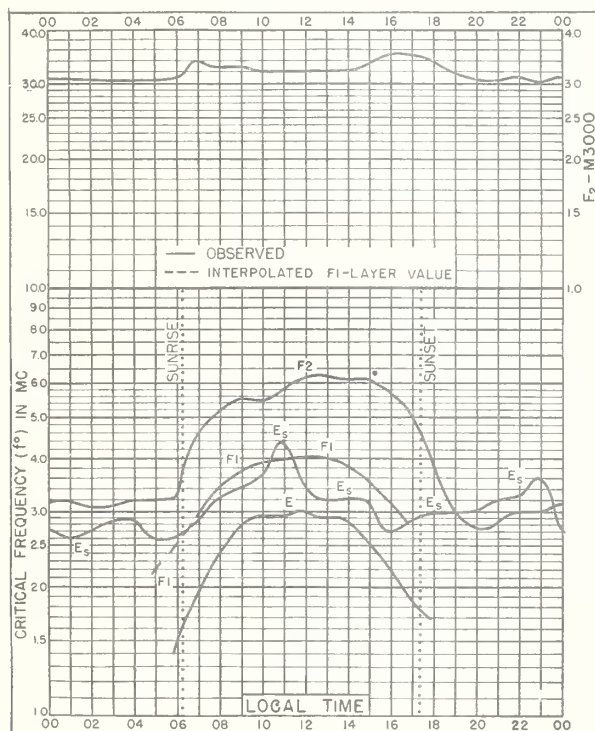


Fig 94. SAN FRANCISCO, CALIFORNIA  
37 4°N, 122 2°W

OCTOBER 1943

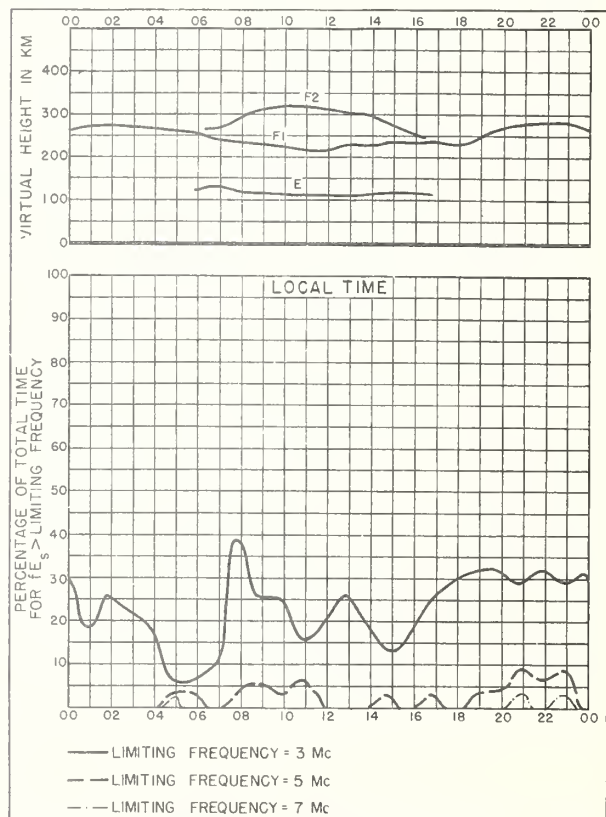


Fig 95. SAN FRANCISCO, CALIFORNIA

OCTOBER 1943



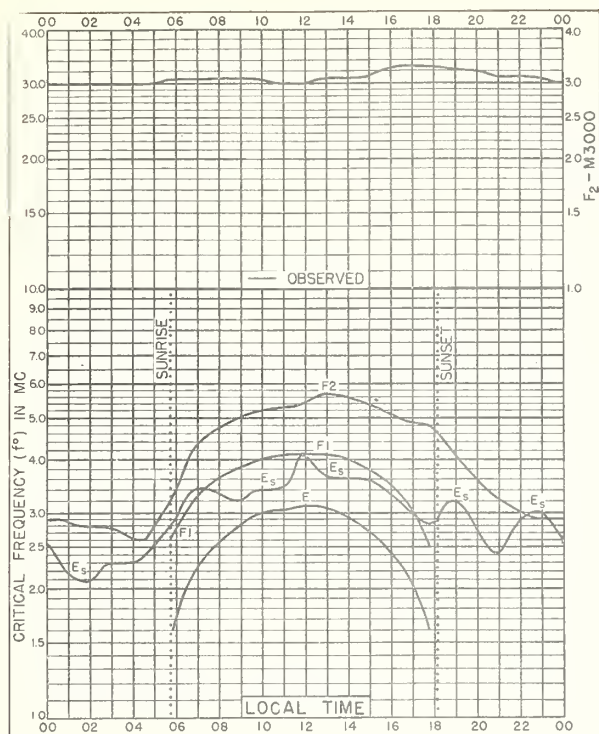


Fig 96. SAN FRANCISCO, CALIFORNIA  
37.4°N, 122.2°W SEPTEMBER 1943

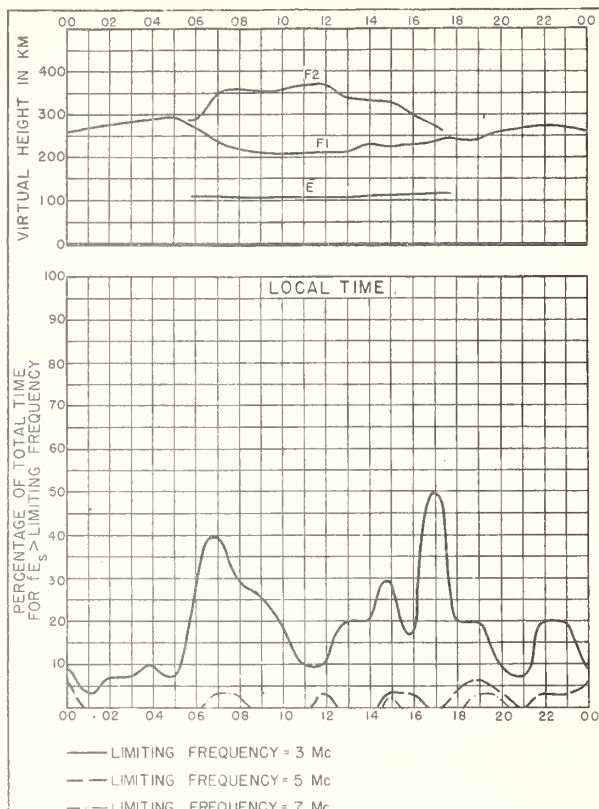


Fig 97. SAN FRANCISCO, CALIFORNIA SEPTEMBER 1943

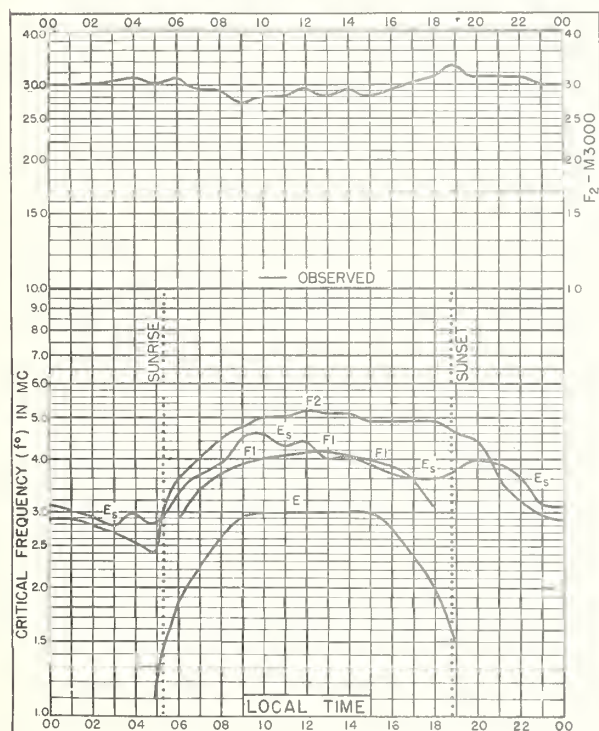


Fig 98. SAN FRANCISCO, CALIFORNIA  
37.4°N, 122.2°W AUGUST 1943

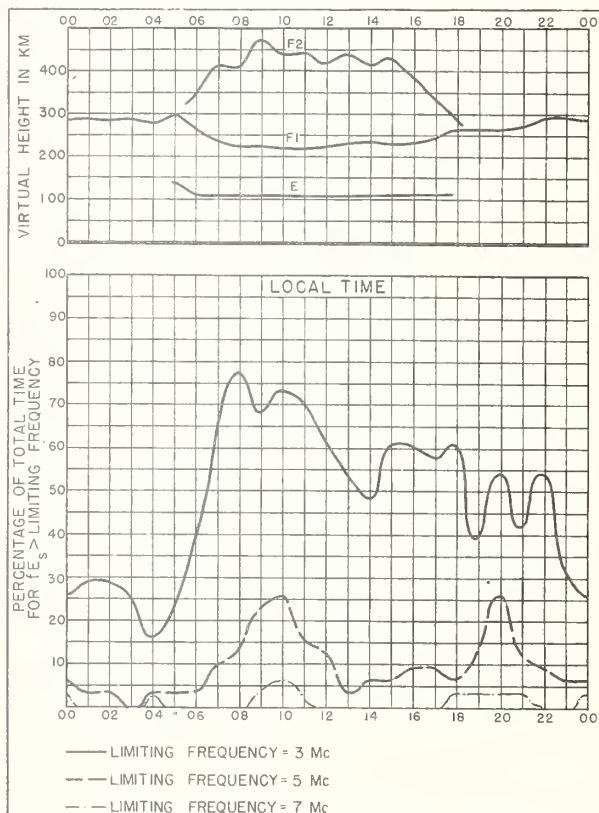


Fig 99. SAN FRANCISCO, CALIFORNIA AUGUST 1943

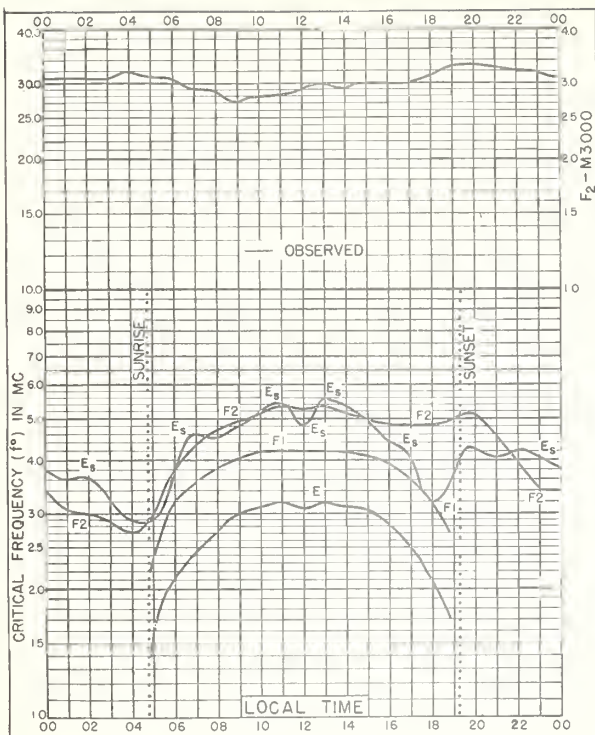


Fig. 100. SAN FRANCISCO, CALIFORNIA  
37.4°N, 122.2°W

JULY 1943

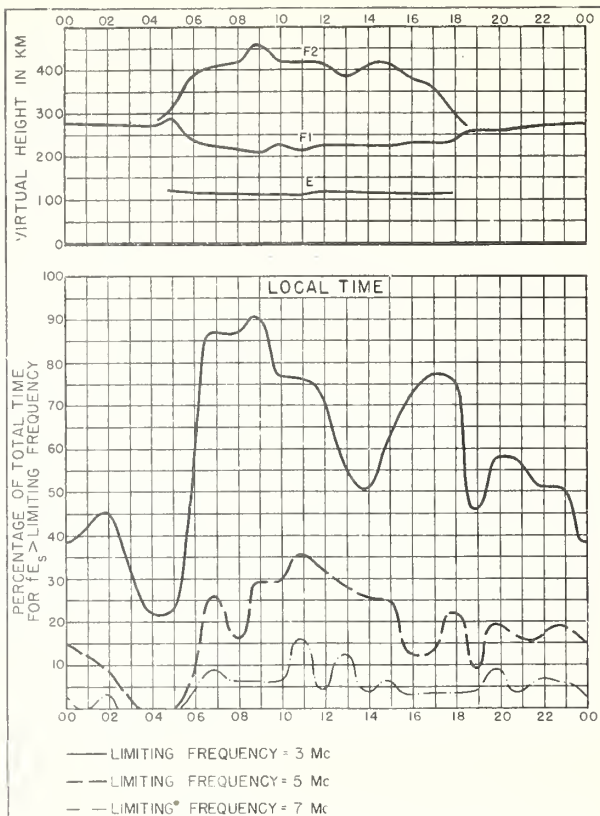


Fig. 101. SAN FRANCISCO, CALIFORNIA

JULY 1943

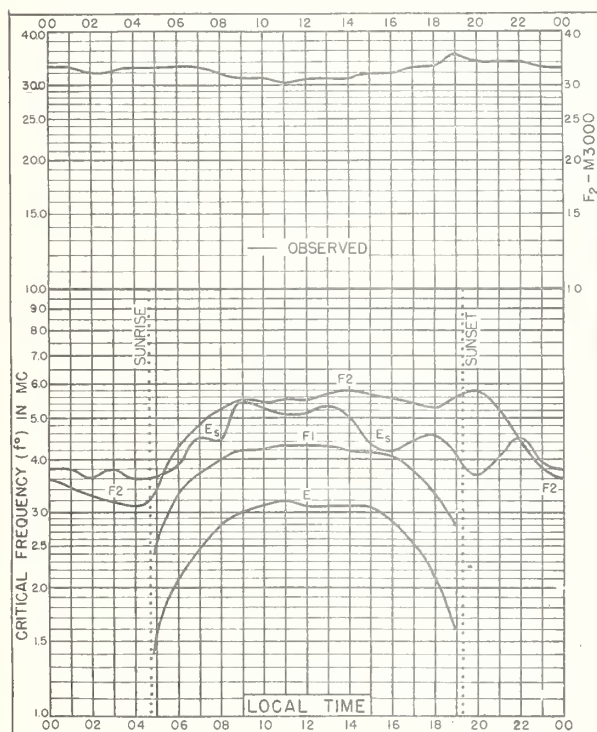


Fig. 102. SAN FRANCISCO, CALIFORNIA  
37.4°N, 122.2°W

JUNE 1943

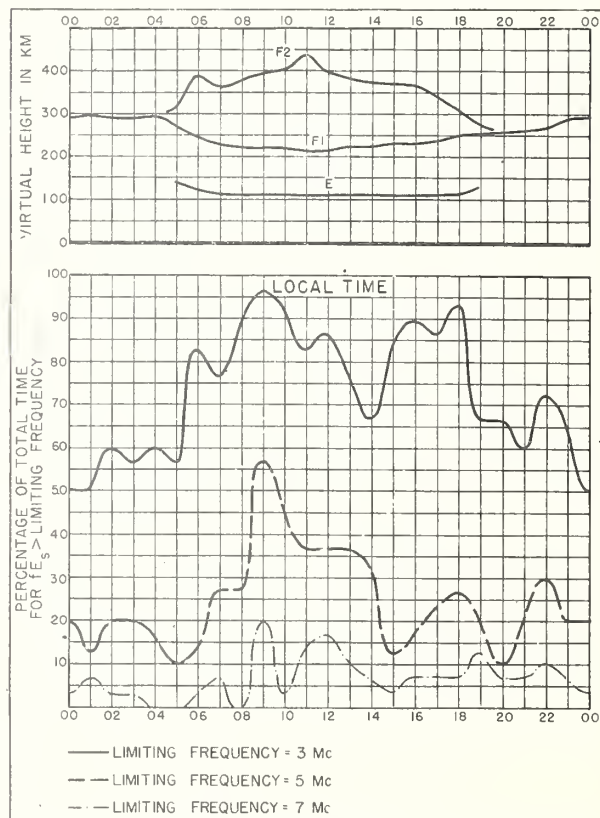


Fig. 103. SAN FRANCISCO, CALIFORNIA

JUNE 1943



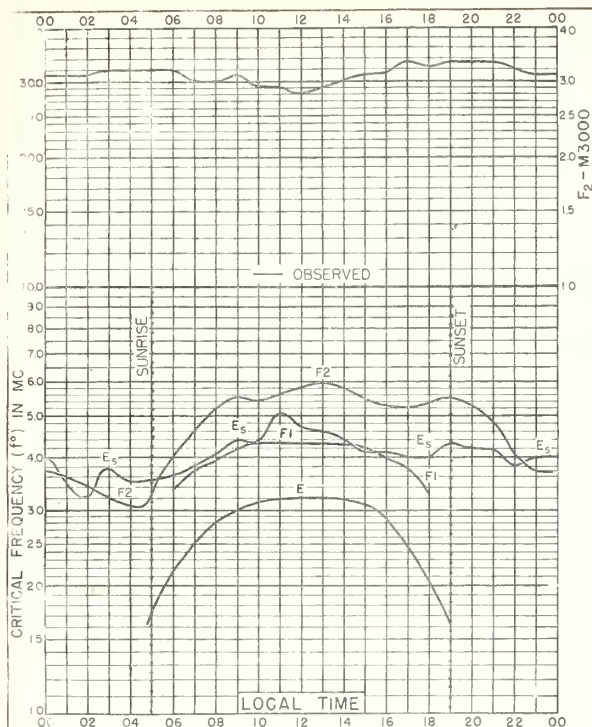


Fig 104. SAN FRANCISCO, CALIFORNIA  
37.4°N, 122.2°W

MAY 1943

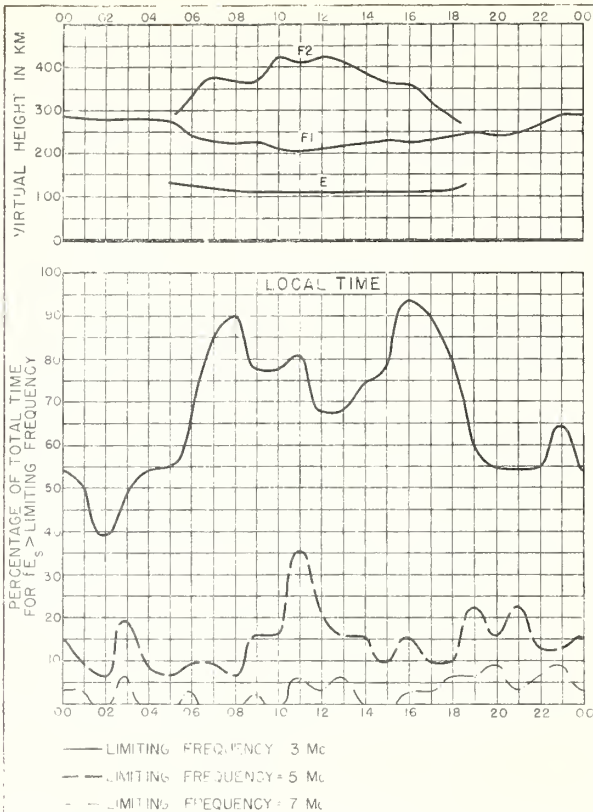


Fig 105. SAN FRANCISCO, CALIFORNIA

MAY 1943

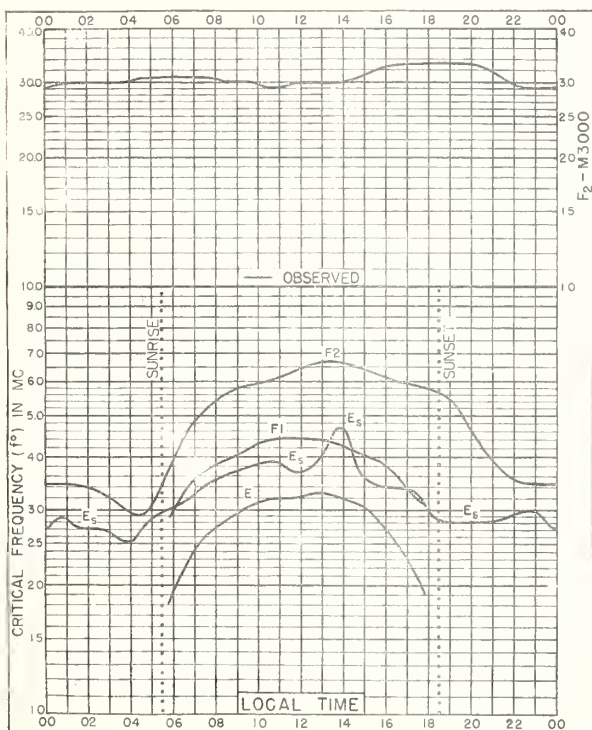


Fig 106. SAN FRANCISCO, CALIFORNIA  
37.4°N, 122.2°W

APRIL 1943

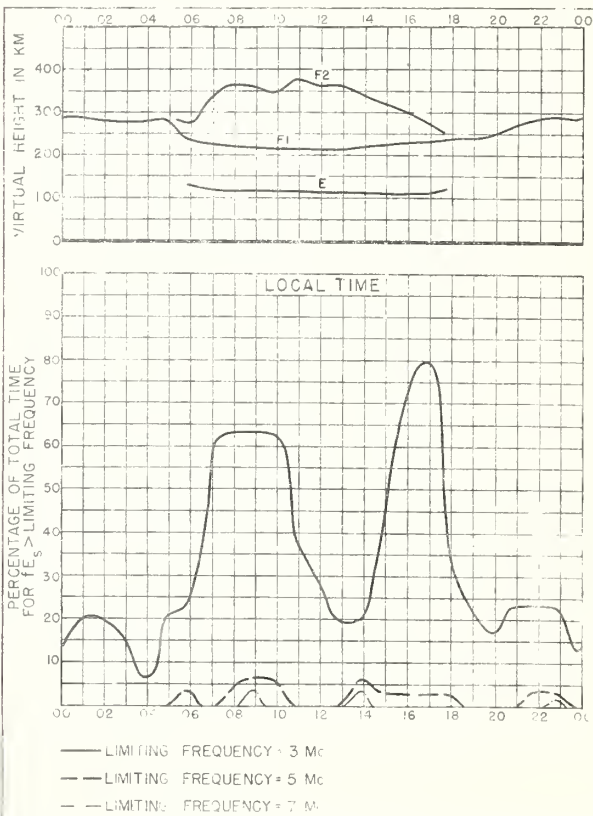


Fig 107. SAN FRANCISCO, CALIFORNIA

APRIL 1943

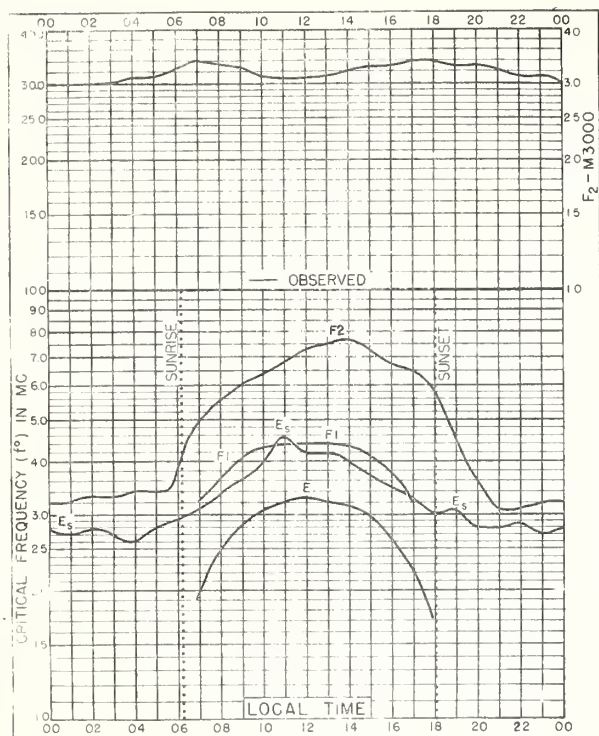


Fig 108 SAN FRANCISCO, CALIFORNIA  
374°N, 122 2°W

MARCH 1943

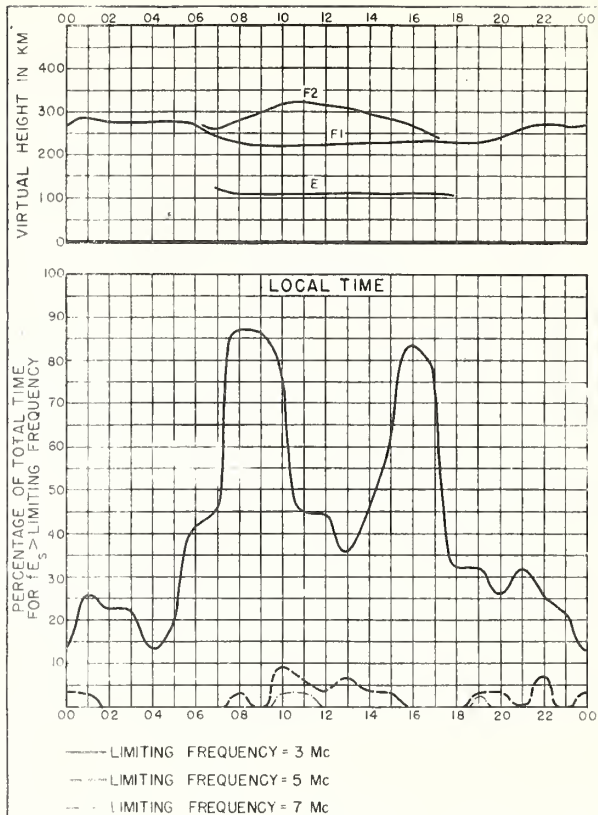


Fig 109 SAN FRANCISCO, CALIFORNIA

MARCH 1943

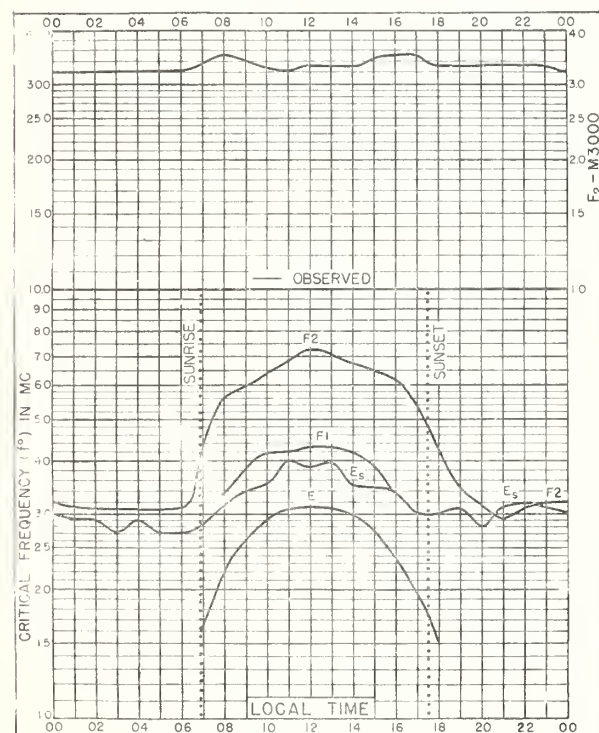


Fig 110 SAN FRANCISCO, CALIFORNIA  
374°N, 122 2°W

FEBRUARY 1943

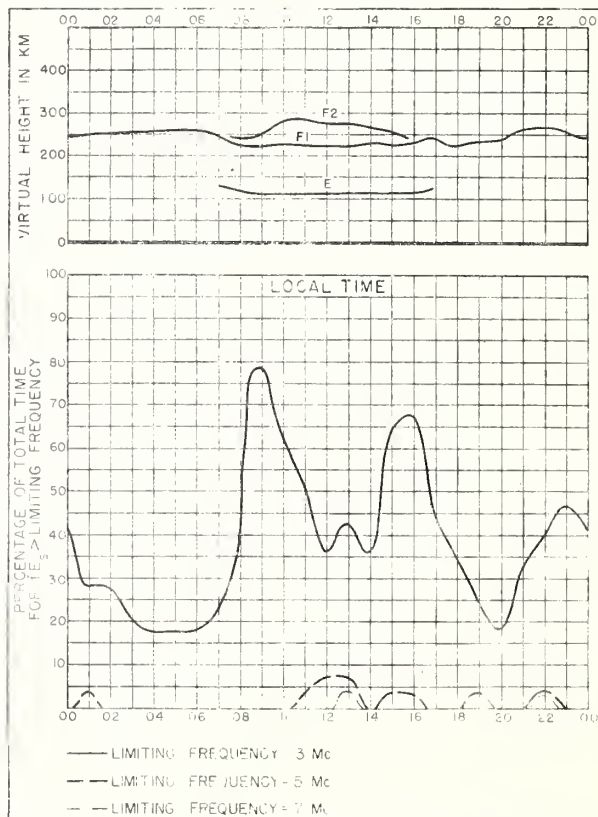
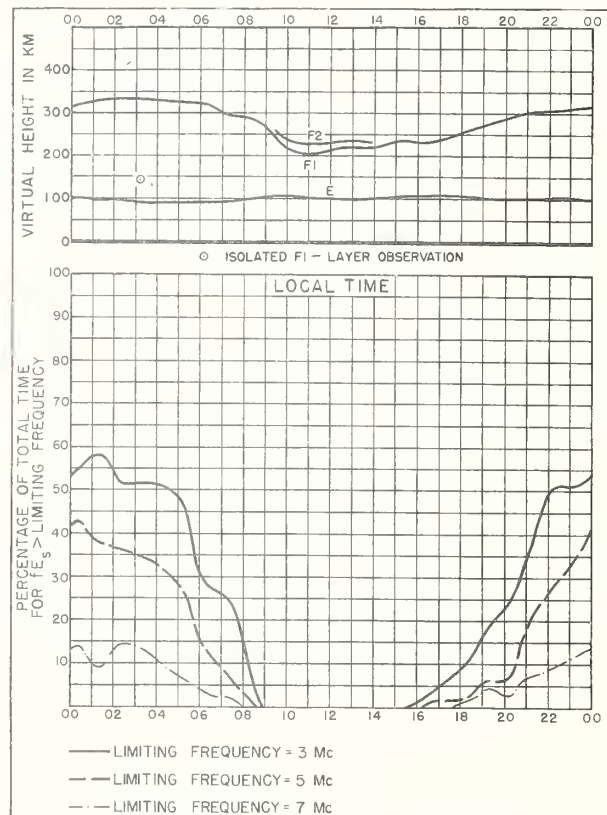
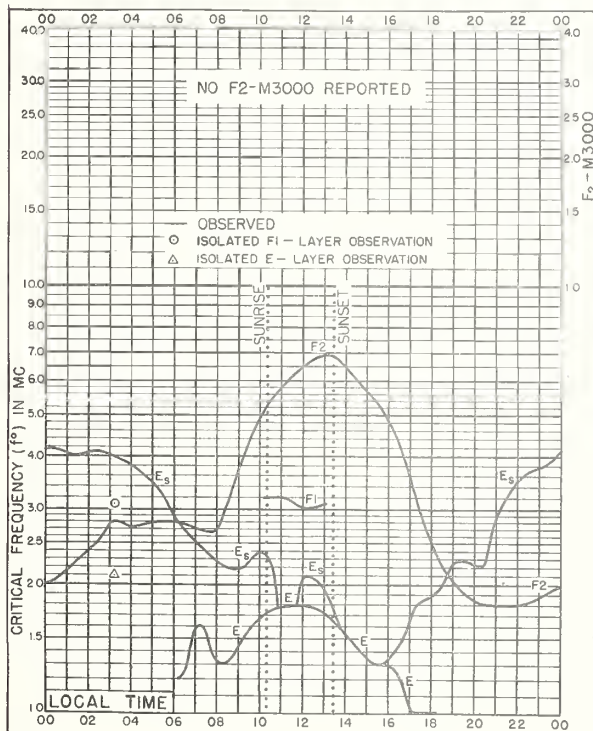
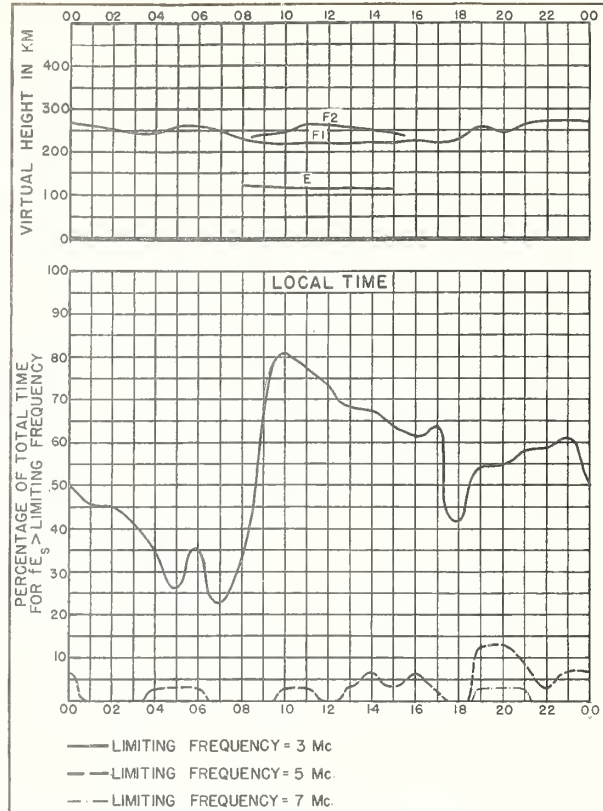
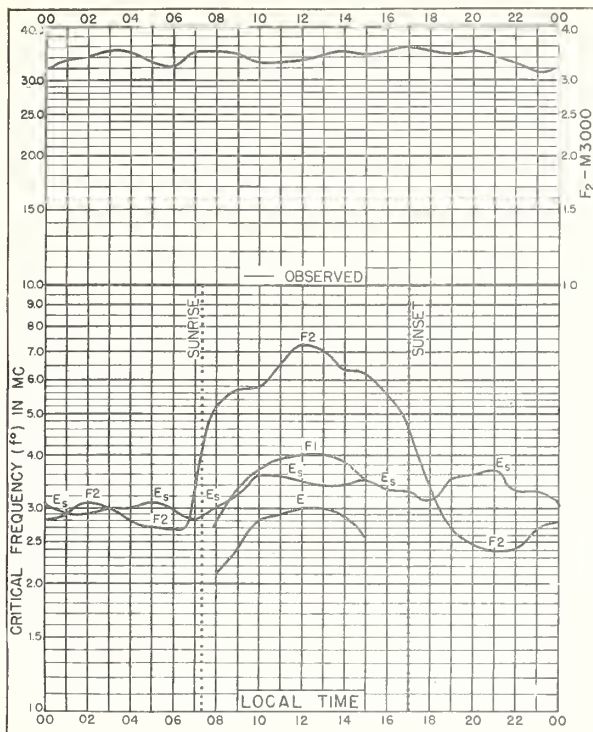


Fig 111 SAN FRANCISCO, CALIFORNIA

FEBRUARY 1943





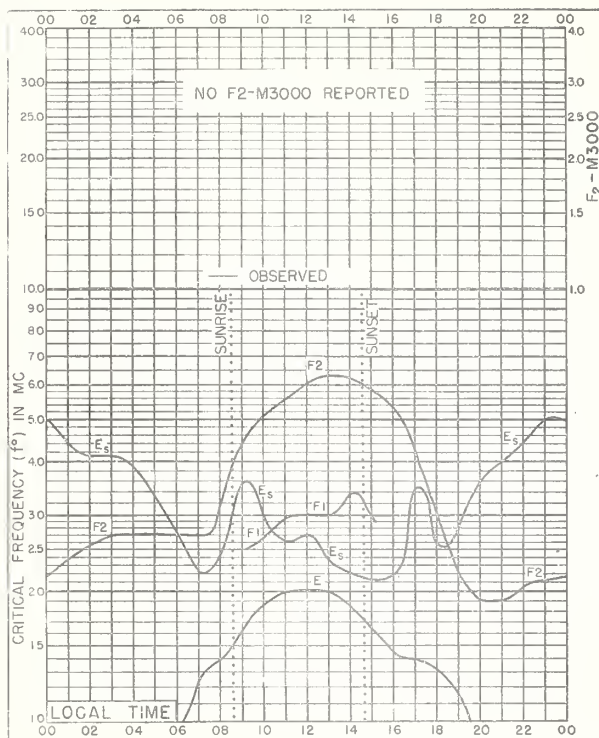


Fig. II6. FAIRBANKS, ALASKA  
64.9°N, 147.8°W

NOVEMBER 1941

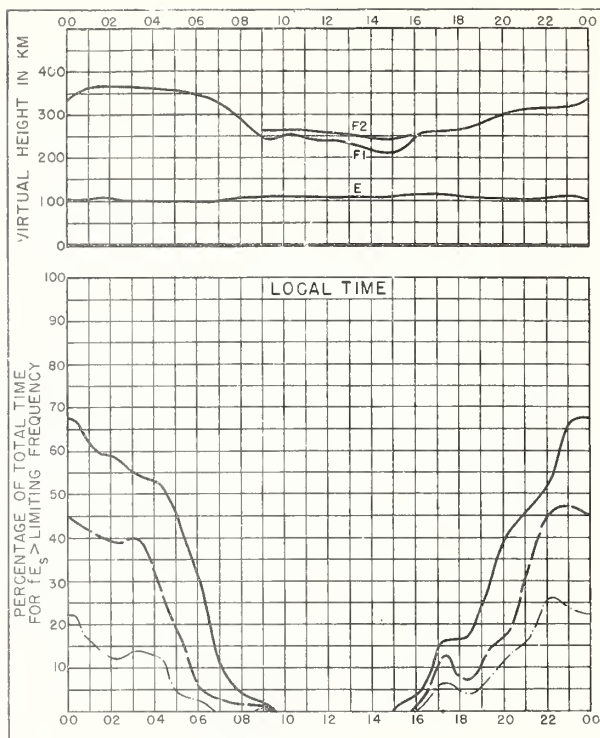


Fig. II7. FAIRBANKS, ALASKA

NOVEMBER 1941

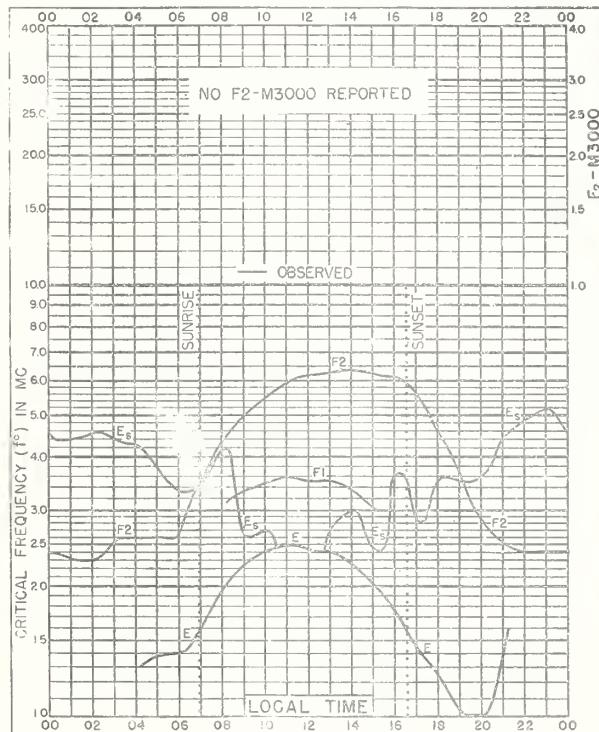


Fig. II8. FAIRBANKS, ALASKA  
64.9°N, 147.8°W

OCTOBER 1941

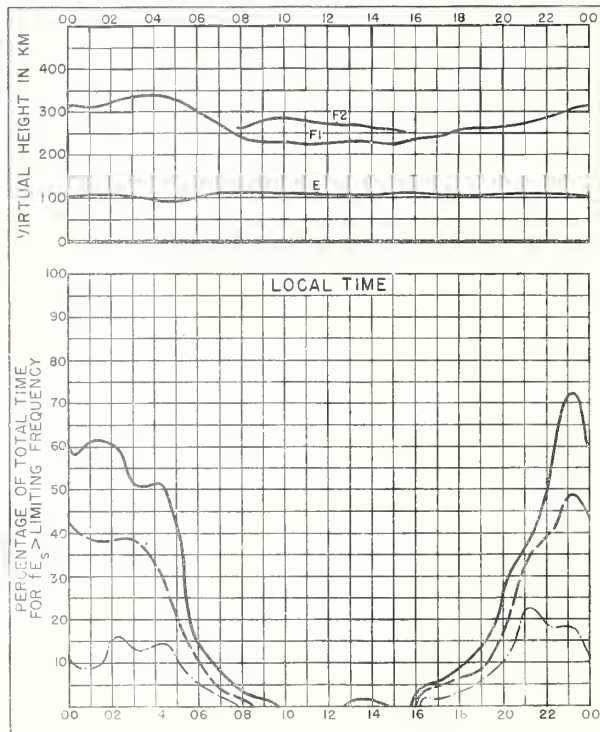


Fig. II9. FAIRBANKS, ALASKA

OCTOBER 1941



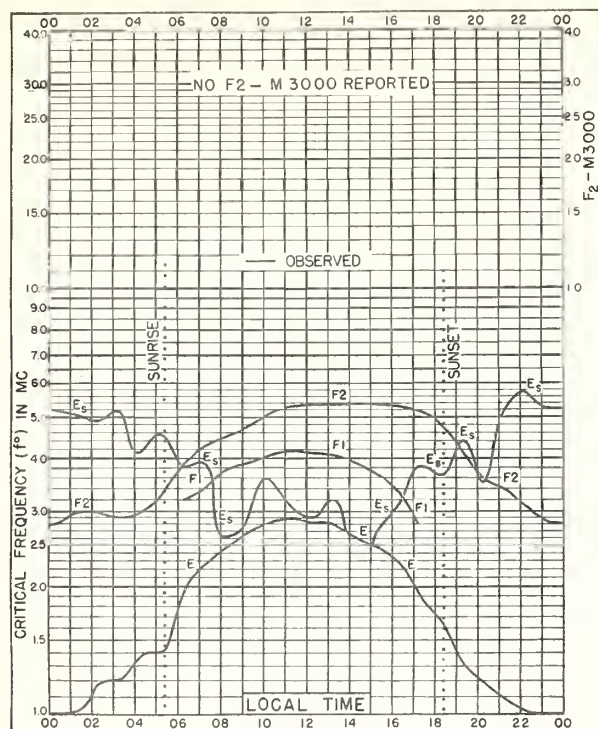


Fig. 120. FAIRBANKS, ALASKA  
64.9°N, 147.8°W

SEPTEMBER 1941

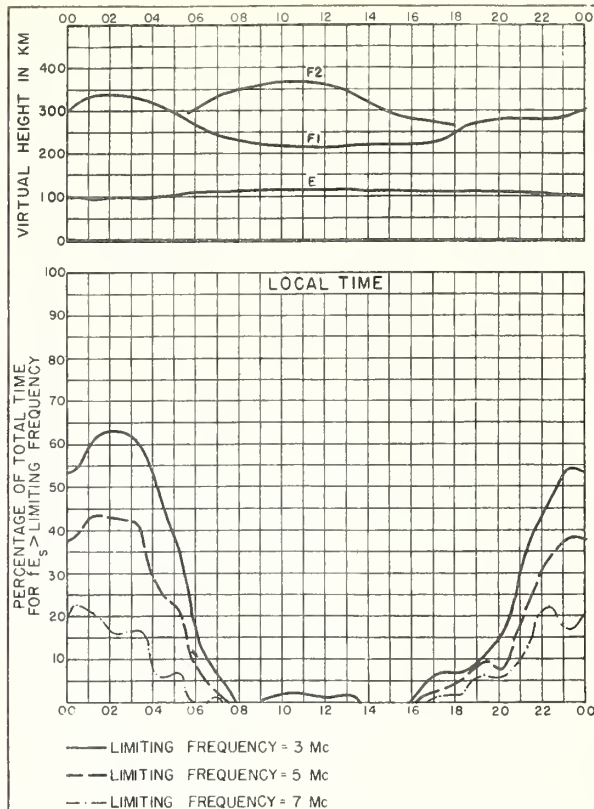


Fig. 121. FAIRBANKS, ALASKA

SEPTEMBER 1941

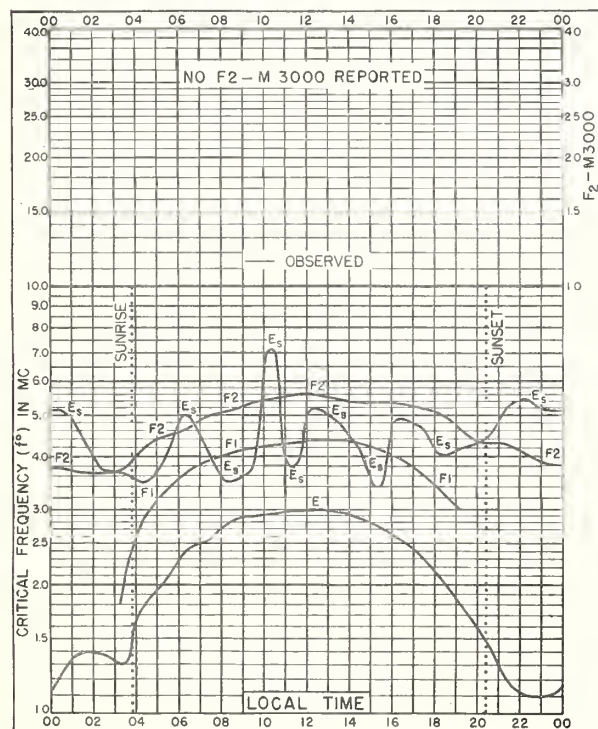


Fig. 122. FAIRBANKS, ALASKA  
64.9°N, 147.8°W

AUGUST 1941

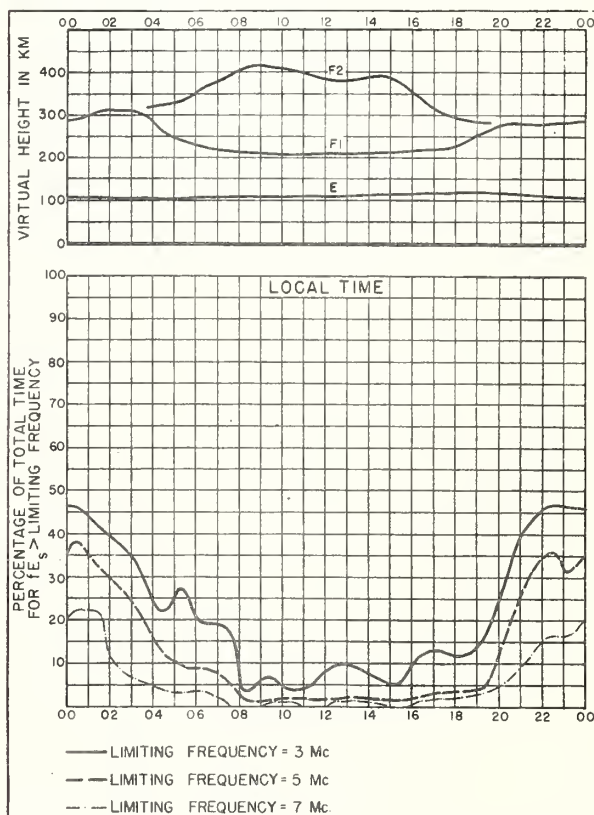
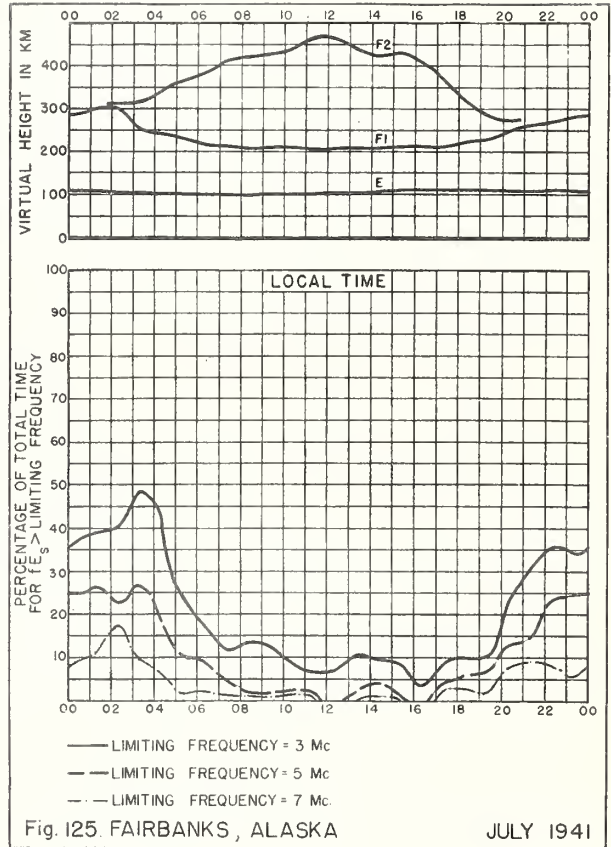
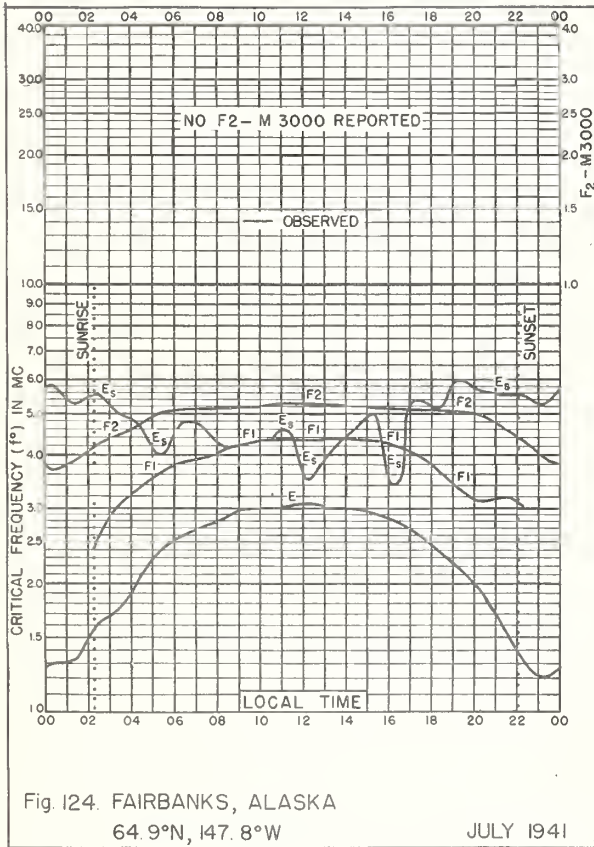


Fig. 123. FAIRBANKS, ALASKA

AUGUST 1941





## INDEX FOR CRPL-F27

	<u>Table page</u>	<u>Fig. page</u>
<u>October 1946</u>		
Washington, D.C. . . . .	10	43
<u>September 1946</u>		
Adak, Alaska . . . . .	10	44
Baton Rouge, Louisiana . . . . .	12	47
Boston, Massachusetts . . . . .	11	46
Christchurch, New Zealand . . . . .	13	50
Churchill, Canada . . . . .	10	44
Fairbanks, Alaska . . . . .	10	43
Guam I. . . . .	12	48
Johannesburg, Union of S. Africa . . . . .	13	49
Maui, Hawaii . . . . .	12	47
Ottawa, Canada . . . . .	11	45
St. John's, Newfoundland . . . . .	11	45
San Francisco, California . . . . .	11	46
San Juan, Puerto Rico . . . . .	12	48
Trinidad, Brit. West Indies . . . . .	13	49
<u>August 1946</u>		
Campbell I. . . . .	15	53
Christchurch, New Zealand . . . . .	15	53
Guam I. . . . .	14	51
Johannesburg, Union of S. Africa . . . . .	14	52
Kernadec Is. . . . .	14	52
Maui, Hawaii . . . . .	13	50
Rarotonga I. . . . .	14	51
<u>July 1946</u>		
Brisbane, Australia . . . . .	16	56
Cairo, Egypt . . . . .	15	54
Canberra, Australia . . . . .	17	57
Hobart, Tasmania . . . . .	17	58
Leyte, Philippine Is. . . . .	16	55
Okinawa I. . . . .	16	55
Townsville, Australia . . . . .	16	56
Tromso, Norway . . . . .	15	54
Watheroo, Australia . . . . .	17	57
<u>June 1946</u>		
Falkland Is. . . . .	18	59
Tromso, Norway . . . . .	17	58
<u>May 1946</u>		
Bombay, India . . . . .	18	60
Delhi, India . . . . .	18	60

	<u>Table page</u>	<u>Fig. page</u>
<u>May 1946 (Cont.)</u>		
Falkland Is. . . . .	19	61
Madras, India . . . . .	19	61
Peshawar, India . . . . .	18	59
<u>April 1946</u>		
Bombay, India . . . . .	20	63
Delhi, India . . . . .	19	62
Madras, India . . . . .	20	63
Peshawar, India . . . . .	19	62
Watheroo, Australia . . . . .	20	64
<u>November 1945 through August 1945</u>		
Chungking, China . . . . .	20 and 21	64 through 66
<u>October 1943 through January 1943</u>		
San Francisco, California . . . . .	21 through 24	66 through 71
<u>December 1941 through July 1941</u>		
Fairbanks, Alaska . . . . .	24 through 25	71 through 74



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Radio disturbance warnings, every half hour from broadcast station WWV of the National Bureau of Standards.  
Telephoned and telegraphed reports of ionospheric, solar, geomagnetic and radio propagation data.

### Weekly:

CRPL-J. Radio Propagation Forecast (of days most likely to be disturbed, during following month).

### Semimonthly:

CRPL-Ja. Semimonthly Frequency Revision Factors for CRPL Basic Radio Propagation Prediction Reports.

### Monthly:

CRPL-D. Basic Radio Propagation Predictions—Three months in advance. (War Dept. TB-11-499- , monthly supplements to TM 11-499; Navy Dept. DNC-13-1 ( ), monthly supplements to DNC-13-1).

CRPL-F. Ionospheric Data.

### Quarterly:

\*IRPL-A. Recommended Frequency Bands for Ships and Aircraft in the Atlantic and Pacific.

\*IRPL-H. Frequency Guide for Operating Personnel.

Reports on Ionospheric Measurement Standards.

Reports on Microwave Measurement Standards.

### Reports Issued in Past:

IRPL Radio Propagation Handbook, Part 1. (War Dept. TM 11-499; Navy Dept. DNC-13-1.)

IRPL-C61. Report of the International Radio Propagation Conference, 17 April to 5 May 1944.

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R7. Second Report on Experimental Studies of Ionospheric Propagation as Applied to the Loran System.

R8. The Prediction of Usable Frequencies Over a Path of Short or Medium Length, Including the Effects of *E<sub>s</sub>*.

R9. An Automatic Instantaneous Indicator of Skip Distance and MUF.

R10. A Proposal for the Use of Rockets for the Study of the Ionosphere.

R11. A Nomographic Method for Both Prediction and Observation Correlation of Ionosphere Characteristics.

R12. Short Time Variations in Ionospheric Characteristics.

R13. Ionospheric and Radio Propagation Disturbances, October 1943 Through February 1945.

R14. A Graphical Method for Calculating Ground Reflection Coefficients.

R15. Predicted Limits for *F<sub>2</sub>*-layer Radio Transmission Throughout the Solar Cycle.

R16. Predicted *F<sub>2</sub>*-layer Frequencies Throughout the Solar Cycle, for Summer, Winter, and Equinox Season.

R17. Japanese Ionospheric Data—1943.

R18. Comparison of Geomagnetic Records and North Atlantic Radio Propagation Quality Figures—October 1943 Through May 1945.

R19. Nomographic Predictions of *F<sub>2</sub>*-layer Frequencies Throughout the Solar Cycle, for June.

R20. Nomographic Predictions of *F<sub>2</sub>*-layer Frequencies Throughout the Solar Cycle, for September.

R21. Notes on the Preparation of Skip-Distance and MUF Charts for Use by Direction-Finder Stations. (For distances out to 4000 km.)

R22. Nomographic Predictions of *F<sub>2</sub>*-layer Frequencies Throughout the Solar Cycle, for December.

R23. Solar-Cycle Data for Correlation With Radio Propagation Phenomena.

R24. Relations Between Band Width, Pulse Shape and Usefulness of Pulses in the Loran System.

R25. The Prediction of Solar Activity as a Basis for Predictions of Radio Propagation Phenomena.

R26. The Ionosphere as a Measure of Solar Activity.

R27. Relationships Between Radio Propagation Disturbance and Central Meridian Passage of Sunspots Grouped by Distance From Center of Disc.

R28. Nomographic Predictions of *F<sub>2</sub>*-Layer Frequencies Throughout the Solar Cycle for January.

R29 and 29-A. Revised Classification of Radio Subjects Used in National Bureau of Standards and First Supplement (N. B. S. Letter Circular LC-814 and supplement, superseding circular C385).

R30. Disturbance Rating in Values of IRPL Quality—Figure Scale From A. T. & T. Co. Transmission Disturbance Reports to Replace T. D. Figures as Reported.

R31. North Atlantic Radio Propagation Disturbances, October 1943 Through October 1945.

R32. Nomographic Predictions of *F<sub>2</sub>*-Layer Frequencies Throughout the Solar Cycle, for February.

R33. Ionospheric Data on File at IRPL.

R34. The Interpretation of Recorded Values of *fE<sub>s</sub>*.

R35. Comparison of Percentage of Total Time of Second-Multiple *E<sub>s</sub>* Reflections and That of *fE<sub>s</sub>* in Excess of 3 Mc.

IRPL-T. Reports on Tropospheric Propagation.

T1. Radar Operation and Weather. (Superseded by JANP 101.)

T2. Radar Coverage and Weather. (Superseded by JANP 102.)

CRPL-T3. Tropospheric Propagation and Radio-Meteorology. (Reissue of Columbia Wave Propagation Group WPG-5.)

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